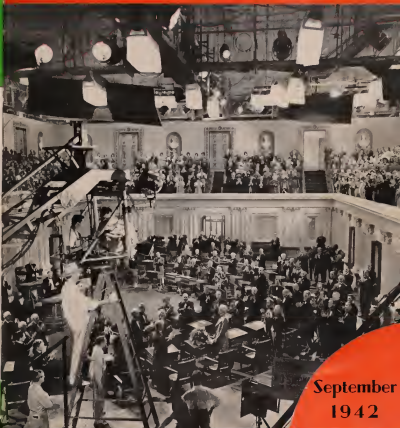


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THE AMERICAN *Cinematographer*

☆ THE MOTION PICTURE CAMERA MAGAZINE ☆



September
1942



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AMERICAN CINEMATOGRAPHER

THE MOTION PICTURE CAMERA MAGAZINE

VOL. 23

SEPTEMBER, 1942

NO. 9

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The Front Cover

This month's cover shows Hal Rosson, A.S.C. (in white shirt at right of ladder), making a scene from MGM's "The Man On America's Conscience." Note interesting lighting of camera on boom to permit sharp downward angle, and characteristic MGM ground without Photo by Gene Riches

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FRANK G. ZUCKER

CAMERA EQUIPMENT ©
1600 BROADWAY NEW YORK CITY



In this scene from 'They Got Me Covered' a set designer provided a huge set that could not be built under modern restrictions—and the real thing proved more realistic than a set would have been.

consider why they don't just take a window flat and get married on the savings? The hero's flat may have all the threadbare furniture and shabby decorations you'd expect to find in the quarters of an \$18-a-week Bunker Bean—but there will be room enough, too, for a dozen people to move around it without being crowded. Nine times out of ten the hero's apartment will be a model of modern design—the sort any actual apartment owner would figure at a rental of about \$200 a month!

In all of this, we've probably captured the line and form of the room excellently, but then we've unconsciously distorted it by adding space "for the camera." We've known that in actuality such-a room would be about, say, 3x12 feet in size. But then we've checked ourselves with the thought that in this scene, the camera must dolly, while in that scene, and that one, and that, we have to make a better-than-tall-figure long-shot. So to be on the

MORE REALISM FROM "RATIONED" SETS?

By PERRY FERGUSON

SOME philosophers once remarked that one of the main differences between a limitation and an opportunity is the viewpoint from which you look at it. In other words, many a thing that seems like a severe restriction may be turned into an advantage if we only look at it from the right viewpoint.

Today's wartime restrictions, which put an arbitrary "ceiling" of \$5,000 worth of new material per picture on our set-construction may perhaps turn out to be in that category. There's no denying it hurts—especially in studios which, like the Samuel Goldwyn Studio with which I am associated, have a rather limited production schedule exclusively of high-budget pictures, and have never turned out "B's", for which art directors in other studios have habitually saved and re-used a continually growing collection of stock sets. It will certainly mean that a lot of scenes will be written out of scripts because we can't construct the necessary sets for them. It will probably mean the shifting of certain stories for the same reason. It will mean doing without a lot of things which we as designers and users of sets have become accustomed, and the development of a whole new system of "ersatz" materials and methods of set construction.

But isn't it possible that in spite of the inconveniences these necessary restrictions impose, we may find some unexpected advantages? I think so, all of us have recognized (and perhaps complained about) abuses in set-design

which can honestly be traced to the fact that we could apparently build almost anything we wanted to. Now that we can't, maybe these abuses will have to be corrected?

For example, many of us in the industry—cinematographers, directors, producers, writers, players and even art-directors (to say nothing of the general public)—have at one time or another complained that except where the designer may be copying some actual or historical building, sets are likely to have all too little connection with the reality of what they represent.

The classic example, of course, is the more night-club. Personally, I have yet to see a real night-club which isn't cramped enough to make one wonder if the human race isn't descended from the aridians, rather than from the simians. But a more night-club generally sprawls over the whole of the studio's biggest sound stages, and has plenty of rooms to dolly the camera everywhere between the tables—and even for the hero to dance without bumping into the dress extras on the dance-floor!

But I think an even better example is the average movie apartment. We carelessly plant our hero as a poor but honest steel mill worker, or our heroine as an equally poor and honest stenographer—poor enough, in any case, so that realism is an responsible problem for them for six or eight weeks. But when the camera follows these heroes we find them living in such spacious apartments we

wide side, we make room, say, 14x20—maybe more! Why worry? A few dollars of extra set-cost aren't to be compared with the loss the directors would make if he found he couldn't get the angles he wanted?

But today these few extra dollars of set-cost simply aren't there. With an arbitrary limit of \$5,000 for new construction throughout an entire picture, every penny counts. As one of my colleagues recently expressed it, we fight harder now over \$20 of added cost in a set than we did over \$10,000 a year ago.

Plenty of possibilities can stem from this situation, but to me one of the most interesting is the possibility of a trend toward greater realism in the average set. But if it comes, it will have to bring with it a closer degree of cooperation between the art-director, the cinematographer and the director than we've ever had before except in rare and unusual instances. The man who designs the sets must be more intimately acquainted with the way the action is going to be played in it. He must be more familiar with the methods and problems of the man who is going to photograph it. And both director and cinematographer will have to understand more of the art director's problems, and be willing to modify their techniques to coordinate their work with what he can give them.

I don't believe that this is at all an impossible condition. As a matter of fact, we've been experimenting with it a good deal in making "They Got Me

The light fabric walls of this small set could be dismantled quickly to permit more exact placement of cameras. Shot by Hal Rosson.

Covered." Mr. Goldwyn's current picture, which David Butler is directing and Rudy Maté, A.S.C., is photographing. For example, one sequence takes place in the Washington office of a big newspaper syndicate. For that set, we very accurately duplicated the actual Washington office of one of our major news syndicates—including the actual dimensions of the corridors and rooms, which are a good deal smaller than you'd usually expect to find them for picture purposes. Yet they do quite successfully for our purposes.

We build our sets with inside walls. This, of course, is nothing new, some studios have been doing it for years, for acoustic reasons. Our reasons were chiefly financial: the cloth construction costless, and if properly hinged around doors at places where pictures are to be hung, and so on, seen just as real to the camera, since they can be given any type of surface treatment necessary.

Since we know in advance of Bob Hope's genius at ad-libbing, and that when directing a comedy like this Director Butler has a very prolific staff, we built many of these rooms false-walled, so that we could be ready for any emergency that might suddenly arise as new business was worked out on the set.

Naturally, in a case like this, you'd expect that at least one wall of these rooms would be built "wild." In this set, every wall was "wild." Every wall in the set could be—and was moved out of or into place at many times a day as there were set-ups, almost.

It proved to be good business. Instead of having to crowd the camera and its crew into a cramped space to get, say, a reverse-angle shot, Rudy would simply have the wall moved and his camera had plenty of room. Since the walls were simply inside stretched over a wooden frame, they were light enough so two "grups" could move them in a matter of moments. When the wall was needed again, it went into place just as easily. Result: there was saved on the set, Rudy and Director Butler get precisely the angles they wanted, instead of cramped approximations of them, set-costs were reduced, and—which I think pleased all three of us more than anything else we achieved an effect of realism that could never have been obtained if we'd assumed the sets "designed for the camera."

Not all of the sets for the picture were made this way. We were able to use some standing sets, and others were built conventionally because it was the studio's first use of fabric sets, and we naturally wanted to be on the safe side wherever there might be any doubt as to the respective merits of solid and fabric construction. But such sets as were fabric-walled proved so successful that I am sure we will make increasingly extensive use of them in the future. As



might be expected, the sound engineers liked them, especially those where we used ceilings, for the fabric ceiling permitted the microphone to be swung overhead in an ideal pick-up position, just above the main ceiling, yet with no risk of casting noise shadows. They reduced set-construction costs very helpfully. And the many lightweight "wild" walls gave the cinematographer and director greater freedom in choosing camera-angles, at the same time speeding up production surprisingly. Finally, and in no small part thanks to the excellent cooperation received from Director Butler and Cinematographer Maté, they gave us increased realism.

Another very interesting step in the direction of realism that today's restrictions on set-construction is bringing about is an increasing tendency to make use of real rooms, buildings and locations instead of sets. In making "This Got Me Covered," for example, we had a sequence played in a drug-store, instead of building a set, we found it thoroughly practical to shoot our scenes in an actual drug-store. In another sequence, we made an abandoned gas-works take the place of a huge set which simply could not have been built under today's restrictions. About all we had to do was get in some artificial cobwebs, set up our lights, and go to work.

Another company, needing a typical American town for several sequences as a major feature, has very successfully used the actual town of Santa Rosa, in the northern part of California. As this was for another studio's picture I haven't, of course, seen the result; but I'd be prepared to wager that they'll prove more realistic than any studio built set.

It is inevitable that in many sequences like this we will find ourselves making steadily increasing use of the projected

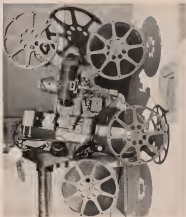
background scenes. In the gas-works sequence from our own picture, for example, we used this process for a number of intimate scenes, employing a back-ground-plate shot in the actual gas-works, and adding a lot of artificial reverberation in the recording. Due to the skill of Cinematographer Maté and special-effects specialist Ray Bigger, A.S.C., the results were perfect.

Probably the outstanding recent example of this technique was Warner's recent "Wings for the Eagle." This story was laid in the great Lockheed aircraft plant, and the remarkable realism achieved in the closer shots by using projected background plates filmed in the factory itself point strongly to the tremendous possibilities this process offers.

Indeed, it seems probable that today's restrictions on set-construction may force us to take advantage of the possibilities this process offers for apparently putting enormous sets (with or without people) behind our actors with a bare minimum of actual foreground set-construction. The special-effects people here for years been telling us what we could do this way to save construction, production-cost and effort, it seems unusual that wartime restrictions from outside the industry may refuse us to listen to them and at last use something we've had potentially available all the time.

There is another way in which we can effectively minimize actual set-construction to great advantage. This is in taking advantage of the camera's powers of suggestion. This is going to call for increasingly intimate cooperation between the cinematographer and art-director, with a more active appreciation by each of what the other tries to do and can do. Very often—as is that much-discussed "Kanada" set in "Citizen Kane"—we can make a foreground piece,

(Continued on Page 490)



But & Howell projector adapted for double-system production. It carries right and left picture reels, sound track, and takes 16 mm. picture and sound back which runs on an engine for take-up reel.

SOUND-RECORDING METHODS FOR PROFESSIONAL 16mm. PRODUCTION

By JAMES A. LARSEN, Jr.

FOR recording sound on 16mm film the professional producer or technician has almost as wide a variety of methods to choose from as though he were working in 35mm. There is not, however, so much disparity between the results produced by the various methods of 16mm. recording as there is between different methods of recording on 35mm. film. Differences in quality exist, of course, but to a much less noticeable degree. Therefore in 16mm. production the choice of a recording method will depend upon a combination of factors, including the accessibility of the subject, the number of release-prints required, the time available, and many others besides the sound-quality required.

The simplest method of 16mm. sound-on-film recording is of course the "single-system" method, in which both sound and picture are recorded simultaneously on a single strip of film. In 16mm., single-system recording seldom, if ever, produces sound of satisfactory quality, and is used only when circumstances demand the utmost portability of equip-

ment. But in 16mm., single-system recording can produce entirely satisfactory sound-quality.

The reason for this difference in quality between 35mm. and 16mm. single-system results lies in the difference in the types of film used for standard and



16mm. double-system sound studio for speaker and operator in editing. Professional results and low cost are available in 16mm. as well as 35mm.

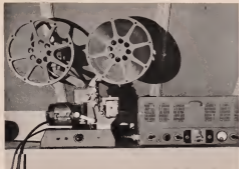
sub-standard camerawork. One of the basic differences between 35mm. and 16mm. is the fact that 35mm. production uses negative film exclusively, whereas most 16mm. professional production uses a reversal-type emulsion, either in the form of black-and-white reversal or Kodachrome. The resulting power of the slower black-and-white reversal film and Kodachrome is such that satisfactory recordings may be made directly on them, even though the films were designed primarily for recording picture rather than sound. Since the resolving power of a film is determined by its grain-structure, it will be obvious that any fine-grained film is more suited to sound-recording. As discussed in detail in the author's article on film materials for professional 16mm. production, in the June issue of THE AMERICAN CINEMATOGRAPHER, reversal films have an inherently finer grain-structure than negative films.

While the grain-structure and resolving power of the moderate-speed black-and-white reversal emulsions and Kodachrome are satisfactory for sound-recording, it is difficult to obtain acceptable sound recordings on 16mm. negative emulsions, especially the extremely fast films such as Super XX and Agfa Super-X, and these emulsions are definitely not recommended for single-system recording.

For some types of production, the greater simplicity and portability of single-system recording is a tremendous advantage. In fact, certain types of film production would be impossible with the more complicated double-system equipment.

In the 16mm. as in 35mm., the majority of professional recording, however, is done by the double-system method, recording sound and picture on two separate strips of film, each designed specifically for the work it is to do. Despite the excellent quality possible with single-system recording on 16mm. reversal emulsions, it is only natural that for the best sound quality, double-system recording is necessary. The characteristics of an emulsion designed to be ideal for sound-recording must naturally be very different from those of a film designed to be ideal for picture-reproduction, and in using a single film for both sound and picture, some compromises must inevitably be made. Though these are less in 16mm. than in 35mm., they still exist to a degree such that while for many purposes 16mm. single-system recording is quite adequate, it still is not the absolute equal of double-system.

However, there are many cases where a slight sacrifice in quality can readily be made for the greater convenience, portability and simplicity of single-system recording. For recording voice only, or for natural sound-effects, as well as for any type of location recording, I have found that single-system recordings in 16mm. are quite as good as double-system. On the other hand, for high-fidelity recording of music, double-system recording, using a modern high-re-



A 16mm photograph like this 16mm unit is essential for 16mm recording.

advertising sound-recording studio, is decidedly the best.

Especially in the field of educational films, and to some extent in advertising films and certain types of military camerawork, there will always be a type of professional 16mm. film which will be impossible to produce without single-system recording. An excellent example of this is a series of educational films on the Indians of the southwest which the author produced last year, recording both picture and sound on Kodachrome with B-M single-system equipment. In bringing the authentic sounds of native music and the Indian languages to the screen, it was an absolute necessity to reduce all equipment to minimum weight and bulk because much of the travel in the Indian country was done in Indian wagons and by pack-horse.

Furthermore, for psychological reasons it was desirable to make the equipment as inconspicuous and as readily movable as possible. On one occasion, in fact, the complete recording equipment was loaded on one pack-horse, with the 12-volt battery power-supply for the amplifier and camera-motor in one saddle-bag, and the recording amplifier, cables and microphone in the other saddle-bag.

Although Hollywood's acceptance of 16mm. has not been uniform or whole-hearted, it seems more than likely that in the near future, because of the necessity for conserving film and other vital resources, more and more use will be made of 16mm. for pre-production talent, make-up and wardrobe tests in both Kodachrome and black-and-white, and, as suggested by Lee Garmes, A.S.C., in the August issue of this magazine, for "pre-photographing" entire productions.

The problem of obtaining adequate tests has become one of the critical problems of production. Disregarding the factor of cost which, even before Paul Harber, was making serious inroads on the number of tests shot for all but the extremely high-budgeted productions, the

least passing of film has made motion picture testing almost an impossibility. In many studios, tests are now being made with stills, which of course cannot and do not give an accurate indication of how the person or thing tested will appear in a motion picture.

But 16mm. film is as yet untried. The rather extensive use of 16mm. tests made during the past year by several major studios has already indicated the accuracy and economy of silent 16mm. tests for either black-and-white or Technicolor production. With modern 16mm. recording equipment—excluding single-systems—in capable hands, the same comparison holds true. Between a silent 16mm. picture test and the final 35mm. shot of the same person or object in a black-and-white or a Technicolor picture, there are minor differences, but so small as to be evident only to a trained cinematographer. In the same way, there would be small, technical differences in the quality of a 16mm. recording and a first-class 35mm. studio recording; but these differences would be such as would be evident principally to the super-trained ear of a professional recordist. They would not be enough to interfere with the value of the test; delivery, intelligibility and voice-quality in either speech or singing would be clearly evident from the 16mm. sound-bud.

There are other marked advantages to the idea of making tests on 16mm. film. First of all, using single-system 16mm. equipment, the test uses only a single strip of film for both picture and sound, and this one strip of film is a type of film not as yet rationed, and in any event the 16mm. film uses less than one-quarter as much celluloid and chemicals in recording a given length of action.

Moreover, when the film returns from the 16mm. processing laboratory, the test is immediately ready to run, without any need of synchronizing, editing, or using additional film for printing.

And since 16mm. sound projectors are light in weight and simple to operate, the tests may be screened in the office or home of the executive or director, even in a partially lighted room. On the other hand, with a modern 16mm. arc projector, the same test may be projected to a screen-size of 30 feet or more in a theatre or large projection-room.

For the great majority of professional 16mm. productions, where the picture is to be made and released in 16mm., the double system method of recording is best, exactly as 35mm. double-system recording has proved best for studio production use. As has already been mentioned, double system gives the highest fidelity in recording, and in addition, the problem of preparing the sound and picture originals for release-printing are greatly simplified.

In making this observation, we do not wish to infer that single-system record-

(Continued on Page 427)



Smaller size "Carfied Sound" 16mm. recorder, middle, amplifier with anti-ground-noise and compressor circuit, bottom, portable power supply.



AVENTURES OF A COMBAT CAMERAMAN

By WILTON SCOTT

MORE and more of America's cinematographers—both professionals and amateurs—are getting into uniform and journeying to the far corners of the earth to serve their country as Combat Cameramen. A number of them, we know uselessly, have been action, especially the men of the Naval Reserve Photographic Unit headed by Commander John Ford. Many of the films of the Coral Sea and Midway battles come from their Mitchells and Eyenors. But as yet none of them has had an opportunity to say anything about their experiences under fire.

Among the British Service Camera

men, though, it's a different story. They've been at war longer than we have, and some news is beginning to filter back from the cinematographers who form the shock troops of the British Army, Navy and R.A.F. Film Units. Their camera assignments have kept them juggling across the map from Norway to the South Seas so rapidly as to provide abundant headaches for any circulation manager who tries to keep readers going to sleep. Take Lt. Bryon Langley, of the British Army Film Unit, for instance. He writes, "Don't send my magazine to Singapore any more because I got away by luck. I'm in Cal-

catta waiting to be posted to the Indian Army Film Unit as a Captain. 'Join the Army and see the world' should be our motto! Since I left here I have been to Lagos in West Africa, Stanleyville in Central Africa, Cairo, was posted to Ceete but the Jerries thought otherwise, Cyprus, Palestine, Bangkok, Singapore, Malaya, Batavia, Ceylon, Cakarta and—"

And if you think today's Army Cameramen have a nice, easy time of it stopping pictures safely behind the lines, consider the experience of Canadian-born Captain Oswald Borradaile of the British Army Film Unit who, by the way, used to be a member of the A.S.C. when he worked in Hollywood a dozen or more years ago. Last year, as reported previously in *THE AMERICAN CINEMATOPHILE*, he filmed the liberation of Abyssinia, doing so fine a job that General Wavell decorated him.

From there he went to Libya where he and his camera paid at least one visit to Tobruk at a time when it was under siege by the Nazis, who boastfully reported that not even a mouse could enter the city. From there he went to Palestine, Iraq and Iran (Persia), and back again to the Egyptian desert.

There, just before the present Nazi drive forced the British back into Egypt, he headed for Tobruk again. On this trip, his conveyance was a boat which was carrying a little matter of 250 tons of ammunition to Tobruk. En route, they had a visit from the Jerries. The crew kept their guns firing until the ship took her final plunge.

The attack lasted more than two and a half hours before the ship finally sank in flames. For the first two hours Borradaile kept busy with his camera (and he says regretfully he "should have had some good stuff.") Then a bomb knocked him out and set the boat well ablaze.

In the explosion, Borradaile was tossed, unconscious, by the blast, to land on a dock-load of depth charges at the opposite end of the ship from where he had been working.

A destroyer managed to get near the blazing wreckage-ship to rescue the crew. At last only two officers remained aboard. They were trying to board the destroyer when a bomb blew the two ships apart. The two officers then moved to the stern of their ship, from where they could jump to the relative safety of the destroyer's deck as the warship passed close by.

Doing this, they passed close by Borradaile, who was still lying unconscious on the depth-charges. And at that moment, the peculiar fate which seems to watch over cameramen went into action. A fuse on one of the charges had become ignited, and just as the officers passed by, it burned through Borradaile's clothes enough so that even though he was unconscious, the pain made him wince and try to move slightly.

Right as it was, the movement was enough to catch the eye of one of the

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The first class of Signal Corps Cinematographers (left, students and instructors. In the rear, by camera) Signal Center Chief John Arnold, A.S.C., President Fred Jackson of the A.S.C. and Alvin Weyckoff, A.S.C., coordinator of the course. IBM national and corporate cameramen who aided practical instruction in their own right learned the operation of standard Mitchell cameras. Photo by Ted Wickham.

UNCLE SAM'S CAMERAMEN ARE COMING!

THREE months ago it was announced that the A.S.C. and the Research Council of the Academy of Motion Picture Arts and Sciences were collaborating to train qualified amateur and semi-professional photographers to serve as Combat Cameramen in the U. S. Army Signal Corps. Never before had there been such a need for so many trained cinematographers. Never before had there been an attempt at such intensive bona-fide training as cinematography is so short a period. And never before had the foremost technical figures of the motion picture industry lent their support—much less their active participation—to anything resembling a school of cinematography.

We may rightly ask, therefore, how this ambitious plan has turned out.

The only answer is that it is an unqualified success. At this writing, five successive classes have either entered training or graduated—some of the first graduates are already in active service—and a fifth class is being formed. All told, the project has in an incredibly short time provided the Army with over two hundred intensively trained cinematographers capable of taking any standard 35mm camera into action anywhere the Army may need them, and bringing back a first class picture.

So successful has this training course proven that it is to be continued until the Army's demands for Combat Cameramen are filled. It is being expanded to the extent that qualified applicants are now being accepted from other parts of the country, instead of only from the Southern California area, as was first announced.

In view of this, it may be well to

reprint a brief resume of the necessary qualifications. The applicant must be between 20 and 35 years of age, and physically fit enough to pass the usual physical examination for Army enlistment, since enlistment in the Signal Corps Reserve is required before acceptance into the course. More than this, the applicant must have proven interest and experience in cinematography, either as an advanced amateur or former professional, and a very thorough grounding in basic photographic technique. Applicants from other parts of the country must be in a position to maintain themselves in Hollywood during the eight-week duration of the course, as neither the Research Council of the A.S.C. can assume this responsibility, and the Army has no provision for feeding or housing members of the Enlisted Reserve until such time as they are called into active service.

The classes receive eight weeks of training, divided into two divisions of four weeks each. The first division is under the general supervision of Emory Huse, A.S.C., and deals with the scientific fundamentals of photography, the development, care and handling of film, and similar basic matters. Sessions are held at the Hollywood studios of the Eastman Kodak Company, and actual instruction is given by Mr. Huse and his staff.

The second division of the course consists of intensive practical instruction in the care and operation of standard 35mm cameras, including Mitchell, the Bell & Howell studio-type camera and Eyzon and DeVry hand-cameras, the practical use of lenses, filters, meters, etc. This division is under the direct

supervision of Alvin W. Weyckoff, A.S.C., who has been appointed by President Fred Jackson of the A.S.C. as general coordinator of the course. These sessions are held in various of the major-studio camera departments, with the operative and assistant cameramen in camera-operation, and the Camera Department Heads and Directors of Photography instructing in the other phases.

The first class received its practical instruction at the Camera Department of the Metro-Goldwyn-Mayer studio, with Camera Chief John Arnold, A.S.C., and his staff as enthusiastic instructors. Subsequent classes have been held at the Paramount Studio, with the cooperation of C. Roy Hunter and his staff, at the Columbia Studio, with the assistance of Camera Chief Emil Oster and his associates, and at the 20th Century-Fox Studio, where Supervisor of Photography Daniel B. Clark, A.S.C., and his staff were volunteer instructors.

The climax of the course takes the form of a practical field test, in which each student is given a camera and 100 feet of 35mm film and sent out on his own to make a picture of his own choosing, as a sort of practical final examination upon which he stands or falls.

Coordinator Weyckoff has proven a dynamo of energy in getting the multitudinous details of this course cranked out and running smoothly. He, himself, gives great credit to the Camera Department Heads and studio personnel with whom he has been associated. "Every one of them," he says, "John Arnold, Roy Hunter, Emil Oster and Dan Clark—not to mention their staffs and operative crews

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A CEMETERY THAT MAKES ITS OWN MOTION PICTURES

By HUBBARD HUNT

A CEMETERY or Memorial Park is the sort of an institution that very few people would expect to have any use for films—much less having a busy and well-equipped department devoted specifically to the making of motion pictures and film slides. Yet California's famous Forest Lawn Memorial Park has for some time made and used its own films for direct publicity and for training its staff of more than 450 employees. But then, Forest Lawn has always been a unique institution of its kind in its twenty-five years of existence; it has established itself as an important part of Southern California community life in many more ways than might be expected of what our forefathers used to call a "burym-ground." Weddings, as well as funerals, are held in its picturesque chapel; its Kaiser cinema services are famous and its collection of authentic reproductions of world-famous works of art—painting, statuary and mosaic—have made its grounds one of the show-places of the region.

As the Park has expanded, demonstration and sales problems have become

more and more complex. More representatives and employees were needed, and the work of the many departments became more complex, and less familiar to the members of the staff generally. To those who have visited Forest Lawn, this may seem incredible, for the outward signs, as one goes through the park, suggest simplicity of operation. Actually, there are some twenty departments, each operating under its own head, and each vital to the service rendered. It may be interesting to check the list of these departments: there are the Accounting Department, the Advertising, Architectural, Communications, Credit, Engineering, Executive Vice President's, Financial, Flower Shop, General Manager's, Legal, Maintenance, Mortuary, Personnel, Purchasing, School of Instruction, Memorial Arrangement, Service and Treasury Departments. All of the personnel, and of course especially those who contact the public in any way, must be trained to Forest Lawn's standards and systems of service.

Even before the advent of training films, visual aids were employed in Forest Lawn's training school. Cat-own

sections of the mausoleum, models of the Park, and many other three-dimensional aids to visualization were employed.

About two years ago, Forest Lawn felt the need of motion picture representation to the vast non-theatrical audience, and produced its first major film for this special group. "The Builder Creed," a color and sound film, has been shown constantly since then for as many as thirty bookings a month, and has proved invaluable as a public relations and goodwill builder. Before making replacement prints recently, some new footage was added to replace scenes of the newest church, the Church of the Resurrection. Distribution has been through the Southern California branch of the Standard Talking Film service, under the supervision of Edna Wilson. Advance bookings are scheduled several months in advance, and indications point toward a successful second year.

The war situation has brought about drastic changes in sales procedure, which necessitated the revamping of sales methods. When the author took over the job of creating a series of sales-training sound slide-films, we were fortunate in being able to purchase sufficient S.V.E. equipment to supply our needs for slide film in the training school and for visual demonstration work.

Forest Lawn has for some years maintained a well equipped photographic department with Charles Kassen in charge. Taking black-and-white and color stills for advertising, publicity, and general records has proved to be a full-time job. With a few additions, such as copy-stand, single-frame 16mm camera, and a few accessories, we were able to proceed with the entire production within the Park.

Mr. Kassen's laboratory, with its complete facilities, has been most helpful during these days of tin- shortages. A complete line of Graflex, miniature, and 16mm cameras owned by the Park gives us a broad choice of photographic equipment to work with. All tiling and art work has been done outside through the artist employed by our Advertising Department. The first two films have been completed and we are about to start production on two companion films.

The author was fortunate in owning professional 16mm, photographic, lighting, and acetate recording equipment, which in these days of, of course, unobtainable to obtain.

Before production could start, it was necessary to build a small studio. A space recently unused was selected and adequate power lines were brought in for lighting. Several standard sets were made to provide living-room and office interiors. Props were rented and as the first film went into production, we were able to boast of a small and compact

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Aces of the Camera XXI:

Joseph Ruttenberg, A.S.C.

By WALTER BLANCHARD

PEOPLE who picture an "ace" newspaper photographer as a hard-boiled newshound who goes through life with a "get-the-picture-and-to-Hell-with-Art" attitude ought to meet Joseph Ruttenberg, A.S.C., for Joe Ruttenberg began his photographic career as a camera-reporter for Hearst's "Boston American," and went on from there to win the coveted Academy Award for his artistic skill in filming "The Great Waltz." Since then he has been responsible for "Dr. Jekyll and Mr. Hyde," "Woman of the Year," and "Mrs. Miniver," to name only a few of the films brought to the screen with the unmistakable Ruttenberg touch impressed on every frame.

The Ruttenberg career, as Joe looks back on it now, begins very amusingly

Back in his native Boston, 'teen-aged Joe decided he had come close enough to man's estate that he ought to get a job. To this end, he haunted the office of an employment agency operated by a boys' group to which he belonged. "But to tell the truth," says Joe, "it wasn't so much the side way they told me each day that there was nothing for me that made me stick to that particular agency as the fact that they were just a few doors from the plant of the 'Boston American,' which was one of the first newspapers in the country to put its pressroom behind big show-windows for the benefit of the public. Every day, after raking sure the agency didn't have a job for me, I'd walk down the street and spend hours gazing in at those fascinating big presses!

"Finally there came a day when, just as I was about to leave the agency, the phone rang. The gal at the switchboard hastily called, 'Wait a minute—this may be something for you.' A resident later she told me the phone call was from the 'American,' and there was a job open there for a copy-boy—if I want it!

"Did I want it?! That gal never knew how close she came to being missed that day, for a job at the 'American,' near those fascinating presses, was my idea of heaven! I broke all records covering the distance from the employment office to the newspaper and starting to work!

"The job itself wasn't particularly taxing to my young mentality. A 'copy-boy' in a newspaper office, you know, is a glorified messenger-boy. We sat on a bench like so many bellhops, and rotated on a 'first in, first out' basis in answering the Editor's cry of 'Boy!' The chief task was to take the typewritten copy from him and shoot it through the pneumatic-tube conveyor to the composing-room, where it was set into type. For this, we received the princely sum of \$3 a week.

"But that 'first in, first out' business worked in reverse ways than one I learned that after a few weeks, when an economy wave hit the 'American.' Expenses had to be pared—including the salary of one copy-boy. As the copy-boy most recently hired, I was logically the one to be fired. Fortunately, I got word of it about a day ahead of time. As I said, I was thoroughly in love with a newspaper career, and determined to hold onto that

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A.S.C. on Parade



The question everyone's been asking, "Where's Lt. Gregg Toland A.S.C.?" was answered this month when Gregg suddenly bobbed up at the 20th Century-Fox studios to complete a very important filming job for Commander John Ford's Navy Film Unit. Above we see a picture of Gregg, snapped somewhere farther west in the Pacific battle area, if we're to judge by that hunk of young artillery hanging from his belt.

A great big salute to Henry Freshick, A.S.C., who is now Private Henry Freshick of the U. S. Marine Corps. Yes—like all leathernecks, he got into uniform by enlistment, and he's working up the leatherneck ladder the hard way, rather than using his professional standing to wrangle a commission. Just the same, we'd like to see Henry with his usually flowing locks cropped in a regular tin "Devil Dog" haircut—!

A surprise visitor this month was Capt. Art Lloyd, A.S.C., of the Army's Signal Corps, who showed up unexpectedly at the A.S.C. clubhouse with his smile working overtime and looking ten years younger in spite of all the hard work the Army's been giving him.

Billy Skell, A.S.C., was yanked off his job Technoblogging Walter Wagner's loaches in "Arabian Nights" to go on active service as a Captain in the Army Air Force. Did you know, by the way, that Billy flew with the R.A.F. (then the R.F.C.) in the last war?

And W. Howard "Duke" Grosser, A.S.C., has taken over for Billy as Technoblog specialist on "Arabian Nights."

Victor Milner, A.S.C., taking himself a quick trip to Texas to visit his son, Lt. Victor Milner, Jr., of the Army Air Force, before starting Cecil DeMille's "The Story of Dr. Wassell."

Congratulations to Edith Croninger, A.S.C., on his recent marriage to the charming Yvette Bestley.

Congratulations, too, to Russell Metty, A.S.C., the proud papa of a brand new 7-year-old baby daughter.

Joe Ruttenberg, A.S.C., they say, is trying to quit smoking these big, black cigars—so Director Norman Taurog pulled a lovely rib on him. Steena Norm "Whistled" a generous supply of Joe's favorite El Repos with the crew the other day, and every few minutes a juicer, or a grip, or some other member of the troupe would put Joe on the back and present him with a cigar. By the end of the day, Ruttenberg's pocket bulged with no less than 200 smokals.

Karl Struss, A.S.C., barnies up to the "Fox Whom The Bells Toll" location to run Ray Rossmore, A.S.C., glimmering Paramount's Technicolor epic.

Joe Valentine, A.S.C., took time off the other day, so we have, to take his Army physical. Looks as though Uncle Sam's got the finger on our Joseph!

Theodore Spackahl, A.S.C., phones to tell us he's sure the picture we used on our July cover shows his suit of "Wake Island" at work instead of the one skipped by Harry Hollenbergs, A.S.C. If so, we apologize—but it sure looked to us like Harry's well-known fat topped chaplain beside the camera. Maybe we're both wrong, and it was the untid piloted by Billy Meller, A.S.C., who also shares credit on the picture!

Speaking of Billy Meller, Paramount has wisely picked up his option for an other year of leasing. If Uncle Sam doesn't exercise a prior option!

Clife De Vries, A.S.C., who's been with MGH since the days he and "Woody" Van Dyke were making silent Tim McCoy Westerns, moves over to 20th-Fox on a swell new contract.

Just after finishing the first episode of "Flash and Fantasy" at Universal, Stanley Carter, A.S.C., was called back here by his boss, David O. Selznick, for a fresh loanout to glimmerize "Passion Girl." Meanwhile, Paul Evans, A.S.C., carries on with "Flash and Fantasy."

Greetings to two new members of the A.S.C.—Stanley Hershey, A.S.C., and John S. Cronin, A.S.C.

Arthur Todd, A.S.C.

It is with sincere regret that we chronicle the passing of Arthur Todd, A.S.C., who died suddenly on August 28th as the result of a heart ailment. A veteran of the camera profession, Todd was one of the best-trained members of the A.S.C. He received his start in the industry in 1918 as a helper in the laboratories at East Lee, N. J., and rose rapidly to the position of First Cameraman.

During his career he was associated with nearly all of the producing companies, including many pioneer organizations now long forgotten. During the later silent days he was for many years associated with Universal, where he photographed most of the highly successful film starring Reginald Denry. More recently he had been under contract to Warner Bros., where he had worked for the last ten or twelve years.

Quiet, capable, and always good-natured, Arthur Todd will be missed by a host of friends in and out of the industry. To his wife and family we extend our sincerest sympathy.

Fevrell Marley, A.S.C., and Ernest Palmer, A.S.C., will be at 20th-Fox for another year, as Camera Chief Dan Clark, A.S.C., and Col Zarnack picked up their options.

Lee Garnea, A.S., on loanout to RKO, filming "Stand By to Die."

George Barnes, A.S.C., after finishing "Once Upon A Homeymoon" for RKO, moves over to Universal to glimmerize Dana Barrymore in "Nightmare."

Robert De Graess, A.S.C., also Universal-bound, to turn around the glimmer-lightings for "Pittsburgh" and Marlene Dietrich.

Arthur Miller, A.S.C., heads out to the desert to assist locations for "The Immortal Sergeant." But he'll appreciate the story the soldiers out there tell about the soldier who died while on desert duty, went to Hell—and sent back for his blankets!

Harry Stradling, A.S.C., gets the assignment to photograph MGM's "The Human Comedy," with Mickey Rooney, but possibly without the services of Arthur William Saroyan, who was originally to have directed.

THROUGH the EDITOR'S FINDER

ONE of the finest compliments this magazine has ever received came to us recently from the Visual Aids Director of one of our largest and most important Army Service Commands. In his letter he told us that *The American Cinematographer* is "being used to good advantage at this headquarters in the training of men who will operate training film libraries within this Command." By way of confirmation he enclosed a copy of a memorandum issued to the men he was training, urging them to read specified articles in *THE AMERICAN CINEMATOGRAHER*. From the first seven issues of this magazine for the current year, no less than twenty-one articles were listed as being helpful to these men in the Army's visual education service. Five of them were indicated as comprising reading material, with the statement that questions based upon them would be included in the Final Examinations for the course.

We are sincerely appreciative of this compliment, and of the many similarly appreciative comments we have received from photographers in the Services of the United Nations all over the world. Many months ago, when active American participation in this war looked only as an eventual probability, we determined to make the pages of *THE AMERICAN CINEMATOGRAHER* a source of worthwhile practical information for photographers in our Services and those of our fellow-democracies. For photography, and particularly cinematography was, we felt, bound to play an increasingly important role in the War Effort. Today, comments like the one quoted indicate that this viewpoint was correct, and that, we are so far at least, striking usefully close to our target.

But in addition to saying "thank you" to our readers in the photographic branches of the Services, we would like to ask that they let us know precisely what type of information they most need. Use to *THE AMERICAN CINEMATOGRAHER*'s position in the film professional field, and its unique combination of that work interrelated contacts with film professional, educational and amateur activities, this magazine has unequalled access to the best and most authoritative information on almost every phase of the making and use of motion pictures. But it is not always easy to determine, from a comfortable desk in Hollywood, just what information will be most useful to the men actually in the field. For that, we ask the cooperation of our readers in the Service, to the end that *THE AMERICAN CINEMATOGRAHER* may continue to serve them to the fullest practical advantage.

THE other day at a party we found ourselves sitting next to a well-known theatre manager. During the conversation we asked him to what ex-

tent (if any) he felt photography and its related technicalities were noted by the cash eastoners who paid their money at his box-office. His reply—we're convinced it wasn't given for mere politeness—was illuminating.

"Do they notice photography?" he said. "The best way I can sum it up is this: if I were making an independent picture myself, and knew I had to cut corners to keep within a slim budget, I'd do it by saving money on actors, on direction, or on story—but never on photography! Audiences don't seem to expect Academy Award acting in every picture (after all, some of our 'hottest' box-office names are really little better than amateur actors!) and they don't mind it if the direction isn't always up to the John Ford standard. They'll sit and enjoy some amazingly poor specimens of story and dialog. But today—make no mistake about it—they expect first-class camerawork. Ten or a dozen years ago, they wouldn't; but today they do. Maybe they're more familiar with good photographic values now that there's a casual camera or a home movie outfit in almost every home. Anyhow folks go to the theatre looking for good camerawork."

There's another angle to it, too. I've played plenty of pictures I know were "quicker"—but the producers had been smart enough to pay a little extra to a cameraman who could give the picture "A-picture photography," and some times out of ten the audience would accept the picture as an "A". On the other hand, I've played pictures I know cost quite a bit more money, but where the producer had had to save money on his camera crew—and the picture looked more like a "quicker" than the real "quicker" did, and left the audience with a feeling the film had been cheaply made.

"No, from the exhibitor's point of view, camerawork is one phase of production where you'll save money by paying for the best, for readers audiences can see and notice any cheapening there quicker than in almost any other phase of picture-making!"

LATELY we've noticed in several studios a regrettable tendency in the organization and crediting of special-effects photographic departments to "debarberate" the photographic staff to cinematographic people, especially art-directors and directors. This work is perhaps the most intensely specialized in all the long chain of production, and the most dependent on the photographic "know-how" which can come only from the highly-skilled cinematographers who actually bring those shots to the screen. It seems decidedly wrong, therefore, when "special photographic effects" are credited, to see no differentiation made between the cinematographers and the art-directors or special effects directors

who work with them. It seems wrong that in some studios these carefully photographic departments are operated under the Art Department, and in others headed by art-directors or directors who give no credit whatsoever to the cinematographers who actually bring the scenes to the screen.

In pointing out this injustice, we don't seem to imply that the contributions of these designers and directors aren't of value; in many instances they can be of inestimable value in coordinating the visual effect and action with the technical requirements inevitably imposed by the trick process used. But regardless of which of the various special photographic processes may be used, or the value of the assistance received from a special-effects designer or director, the success or failure of the shot ultimately hinges on the skill of the cinematographer who actually executes it. It seems to us, therefore, that the special-effects cinematographer should in all fairness receive credit commensurate with the responsibility he bears.

AS MORE and more of our fellow-Americans don the uniforms of the nation's armed forces to do their part in the world-wide struggle for Freedom, an increasing number of "the people we know"—cinematographers, both professional and amateur, are going into service. And we like to suggest to readers among the nation's amateur movie clubs that they follow the policy already adhered to by the A.S.C. and a number of the country's more progressive amateur photographic clubs, of placing members serving their country in a special list of suspended memberships "for duration"—waiving dues and the requirements, so often encountered, requiring fairly constant attendance at meetings. The dues of the average amateur movie club aren't high—but in comparison with the \$50 a month the average soldier or sailor gets for serving his country, they may be prohibitive. Let's do our part, and keep our fellow-Americans in service as active members while they're doing their bit, without subjecting them to hardship. Most amateur groups can afford to give that much—especially when you think what your unfettered fellow-members have offered that Freedom may need!

WITH film construction a major topic these days, we wonder when it will occur to some of our special-effects experts that, given slightly larger time and sufficiently painstaking craftsmanship, many of the special-effects shots which are now as a matter of course handled by photographing each component and finally blending the several components together in the optical printer could be done equally well direct in the camera. Back in the earlier days of the industry, trick-shots were all done that

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PHOTOGRAPHY OF THE MONTH

THE RED PIPER

Twentieth Century-Fox Production
Director of Photography: Edward Cronjager, A.S.C.

This is some of the finest work we've seen Edward Cronjager, A.S.C., do in some time. The story covers such a wide range of moods, ranging from brittle comedy at the beginning to sardonic drama in the later sequences, that it is a difficult task indeed for a cinematographer to make a photographically coherent production out of it while yet responding to the mood requirements of the individual sequences.

Cronjager does this to perfection, however. The opening sequences of the picture are given a brittle, high-key treatment which provides a perfect setting for the introduction of the irresistible "Mr. Howard" as played by Monty Woolley. From this start, Cronjager's treatment proceeds at a sort of matter-of-fact pace for several reels, and only when the action of the story becomes definitely more decidedly dramatic do you realize—with some surprise—that Cronjager's camera treatment has kept pace with the story, shading imperceptibly from the high-key beginning to the softer quality and low-key lightings dramatically necessary for these later sequences. To my mind, one of the pictorial highlights of the picture was the strongly dramatic treatment Cronjager gave the dramatic interview between Woolley and the Nazi major.

In a picture like this, it may be taken for granted that in the closer shots a cinematographer of Cronjager's caliber will make generous use of strong character effect-lightings. There are plenty of them in "The Red Piper," and Cronjager has handled them with such skill that they fit perfectly into the action, and only by an effort of mind does the camera-conscious viewer bring himself to realize how effective they are from a purely photographic point of view.

The special effects work is excellent, though we'd have felt better had there been more indication of gunfire and bombs dropping in the scene of the air raid on Great. We're also probably vainly in the discredited minority, but to us the picture would have been more pleasing had there been less "muzzing" on the part of some of the principal players—including those to whom many critics have given the most praise. But "The Red Piper" is well worth seeing, surprisingly filled with excellent, natural comedy as well as drama.

DESPERATE JOURNEY

Warner Bros. Production
Director of Photography: Bert Glennon, A.S.C.

Special Effects by Edwin A. DuPar, A.S.C.

"Desperate Journey" is a glorified

example of a "top-and-robbers" melodrama with Gestapo heavies and an A-picture budget, but Bert Glennon, A.S.C., has made it one of the photographically more worthwhile offerings of the season. Glennon brings it to the screen with the crisp, virile photography he knows so well how to deliver, and contributes some of the season's most interesting effect-lightings and compositions.

It would be unfair to attempt to single out only a few scenes or sequences for special commendation; almost every scene gives Glennon opportunity for striking compositions and lightings, and he makes every one of them a photographer's delight. The skill with which he manages to achieve vigorous effect lightings while at the same time keeping every bit of the fast-moving "thrill" action clear for the audience to follow deserves careful study. The film climaxes, by the way, with a chase sequence which is a delight to anyone who, like this reviewer, used to revel in the action-films of the old silent days.

The special-effects work of Edwin DuPar, A.S.C., is equally outstanding. The miniature-work in the bombing sequences, and the great amount of process-projection and other intricate trick camerawork deserve the highest praise. DuPar's name hasn't been seen often enough on the screen of late, but it is one we will have to reckon with in this specialized field in the future.

On the other hand, we must remark that there were a few scenes toward the end of the picture—especially the sequence in the R.A.F. headquarters—which did not match up to all well with the body of the picture. They gave us the impression that they must have been photographed by a second unit whose director of photography tended to "walk through" his assignment. Certainly, he took no trouble to attempt to match his technique with Glennon's, an omission which is to be infinitely regretted.

HOLIDAY INN

Paramount Production
Director of Photography: David Abel, A.S.C.

We've often wondered if there was any genuine merit to the way the average producer worries so about entrusting his production only to cinematographers with decidedly current screen credits. "Holiday Inn" proves that the answer—at least if you're a cinematographer like David Abel, A.S.C.—is no. For Dave Abel had been in comfortable retirement for two or three years when producer-director Mark Sandrich persuaded him to get into business once again to bring this delightful musical to the screen. And Abel carries out his assignment with the same deft touch which made the many Astaire-Rogers musicals he photographed so charming pictorially.

Scenes after scenes are pictorial delights, and in between are Fred Astaire's dances, photographed as only Abel can photograph them. In some of the early scenes we thought personally that Fred Crosby's facial appearance could have stood some improvement, but then, Mr. Crosby is a gentleman with decided and inflexible ideas on make-up (or its lack), and after all, it's his own face. In his place, though, we'd have won a better make-up, and given the cinematographer at least half a chance.

There is some excellent, though uncredited, special-effects work in "Holiday Inn," and we're an idea that Paramount's optical printer expert, Paul Lerpa, ought to take a big bow for putting the soap into the much-publicized "firecracker dance."

The cinematic sequence of the picture is one so unobscure interested in what the inside of a studio looks like should miss. It shows something, at least, of studio operation and the making of a knee-shot, and it rings surprisingly true. But, for that matter, "Holiday Inn" is a picture no one should miss.

TALES OF MANHATTAN

Twentieth Century-Fox Release
Director of Photography: Joseph Walker, A.S.C.

"Tales of Manhattan" is one of the most difficult assignments any cinematographer could face. Not only does it have a cast composed largely of top-flight stars, each of whom has his or her individual photographic requirements, but it consists really of five separate stories, each with its own mood, and each demanding different photographic treatment. Joe Walker has done an incredibly fine job in giving each its necessary treatment, yet keeping them all welded into a photographically coherent entirety.

You'll find a considerable variety of photographic styles in "Tales of Manhattan"—a tribute to Walker's versatility—yet each is so deftly handled that it never manages to be out of keeping with the rest of the film.

As usual with Walker's work, a high quality of pictorial effect is maintained throughout. So, too, is the often neglected smoothness of optical effect. All told, "Tales of Manhattan" is worth seeing, if only to see what an artist like Joe Walker can do in one of the year's most difficult assignments.

THE TALK OF THE TOWN

Columbia Production
Director of Photography: Ted Tetzlaff, A.S.C.

"The Talk of the Town" has one of the fastest and most completely cinematic openings we've ever seen. There

is a world of action, and a world of clever cinematic treatment packed into its first few hundred feet. That opening is so good that we can sincerely urge readers who may chance to come late to wait for it, even if it means sitting through an indifferent "B-picture" to do so.

The fact that "Talk of the Town" was photographed by Ted Tetzlaff, A.S.C., should in itself be enough indication that it is an almost flawlessly photographed production. The fast-moving story, which vacillates between bright comedy and melodrama, doesn't give him such pictorial opportunities as, say, "The Lady is Willing," but every scene is an example of polished perfection. His treatment of the players is, as always, outstanding.

The special-effects work—unfortunately uncredited—deserves more than a little praise, too.

WINGS AND THE WOMAN

BKO Release

Director of Photography: **Mate Greenbaum**

This picture, produced as "They Flew Alone," is a very recent import from England, and in looking at it from the technical viewpoint, certain allowances must be made for the fact that it was produced under the inevitably difficult circumstances of working in a decidedly war-torn country. In view of that, it must certainly be said the Cinematographer Mate Greenbaum and his associates have done a decidedly prize-worthy job. The picture very certainly has its technical flaws—there is an even quality which may very likely have been due to the over-crowded and understaffed condition of the British film laboratories, for instance, and perhaps to the doping necessary to produce an American release-print negative—but the net result on the screen is pleasing.

Greenbaum has arranged a good deal of excellent lighting, and his treatment of the players is generally excellent, though we can't help feeling that Anna Neagle should always be photographed in Technicolor.

The work of the special-effects staff—Alan Jages, Desmond Dickenson and Douglas Woolley—with that of Jill Irving, who is credited with the montages, is a particular highlight of the picture. Some of the miniature and back-projection work is unusually fine, taking rank with the best we've seen this year. The way both these and the production scenes are intercut with newsreel stock-photos of some of Amy Johnson's actual flights reflects particular credit on the skill of the miniature experts. We can't help wondering, though, why in so many scenes they made the planes apparently fly with one wing low! The montages are another feature of the film deserving of praise. In an inevitably episodic film like this, the montages naturally have a difficult part to play, and these do it well.

FOOTLIGHT SERENADE

Twentieth Century-Fox Production.
Director of Photography: **Lee Garnes, A.S.C.**

Surprisingly enough "Footlight Serenade" turns out to be one of the most pleasing little musicals of the year. It's unostentatious, but entertaining and Lee Garnes' crisply pictorial camerawork is sheer delight. Even if (like this reporter) you're allergic to Victor Mature, don't miss "Footlight Serenade." Garnes' lightings and compositions are worth the price of admission any day.

There is some interesting special-effects work, among which Betty Grable's process-projection dance with the shadow is a particular highlight.

THIS IS THE ENEMY

Autino Release

Unfortunately, no technical or other credits are available on this unusual Russian picture. Really, we should say "pictures," for it is a cinematic equivalent of a series of one-act plays, five short films arranged to form a single feature-length program.

Whether you agree with the Russians politically or not, don't by any means miss this picture if you're interested in what can be done in expressing ideas and ideas on the motion picture screen. Every inch of this film has a strength and vitality that is refreshing, even if it is in many instances decidedly strong meat. It makes one wonder if we in Hollywood have become too sophisticated to turn out pictures based on equally real, untransmuted emotions.

Technically, the less said about the film, the better. The quality of both photography and sound is uneven—sometimes excellent, sometimes very poor. But considering that parts of the film were produced quite recently in studios in Moscow and Leningrad—during the current war—and that the farther operations of duping and superimposing English subtitles to translate the Russian dialog, did nothing to improve the technical quality, this can be excused in view of the amazing dramatic force of the film. It should be on everyone's "must" list.

CALLING DR. GILLESPIE

Metro-Goldwyn-Mayer Production.
Director of Photography: **Ray June, A.S.C.**

MGM did Cinematographer Ray June, A.S.C., a great injustice when they previewed a work-print of this picture for the press. The print was in unusually poor condition, even for a work-print, and did its best to conceal the fine quality of photography which Ray June, A.S.C., brought to this little picture. Even though it's one of those pictures you're usually likely to see occupying the lower end of a double-bill, it's worth seeing.

June's effect-lightings and compositions make the picture seem much more important than it really is, and several surprisingly excellent acting performances add interest.

HERE WE GO AGAIN

BKO Production.
Director of Photography: **Frank Redman, A.S.C.**
Special Effects by **Vernon L. Walker, A.S.C.**

"Here We Go Again" is one of those pictures designed mainly for laughs, and inevitably offers its cinematographer opportunities only as an afterthought. For the best couple of sequences, Cinematographer Redman certainly has very little opportunity, but as soon as the action moves to the Deluxe resort hotel, he has at least a slightly better opportunity to show what he can do.

Meanwhile, he deals copiously with his players, and when such opportunities as the musical numbers at the party come along, he uses excellently to the occasion. He handles his extras well, in deed, and performs like a veteran in the various wire gags and in the shocking chase sequence. Incidentally, if you grew up on old-time visual comedy and chaos, you'll find much enjoyment in the way they're employed here to offset the verbal comedy to be expected with a cast of radio comers. The trick of using magnets to double for Charlie McCarthy and Mortimer Snerd, to permit them to move about, run and even dance in long-shot, is clever.

JACKASS MAIL

Metro-Goldwyn-Mayer Picture

Director of Photography: **Clyde De Vinna, A.S.C.**

There's nothing about a Wally Beery comedy that lends itself to photographic effectiveness, but Clyde De Vinna, A.S.C., has turned in his usual excellent job on this one. The exterior sequences, as usual with De Vinna, are noteworthy examples of fine exterior camerawork, and deserve careful study. We personally also enjoyed the sequences with the old-time train very much.

FLIGHT LIEUTENANT

Columbia Production.

Director of Photography: **Franz Planer, A.S.C.**

While this isn't one of Cinematographer Planer's most important productions, he does his customarily excellent work in bringing it to the screen. The action covers quite a wide range of moods and locales, and he handles all of them with pictorial effectiveness, and often with excellent realism. Some of his effect-lightings are excellent. His treatment of the players is very good. The uncredited aerial cinematography is decidedly a highlight of the picture, even though some of the scenes appear to have been stock-shots from previous, and more pretentious aerial films. The special-effects work likewise deserves praise.



Illustration showing equipment setup for light reflection on stroboscope.

"Strobo-Sync" Your Movies With Sound-On-Disc

By D. LISLE CONWAY

President, Syracuse Movie Makers' Association



SOONER or later, most amateurs who pursue their hobby seriously become painfully aware of the limitations of strictly silent movies, and want to add sound to their pictures in the form of music, narration or even lip-synchronized dialog. Sound-on-film is the ideal method, of course, but 16mm. sound film recorders and projectors are still pretty expensive—not to mention calling for pretty high priorities these days.

Recording your sound on disc is simple, inexpensive and practical, but since sound and picture are separate, there comes the problem of synchronizing them in recording and reproduction. There have been units made by which you could interlock a projector and a record-turntable either mechanically or electrically, but here again you run into expense and into the fact that the makers of these gadgets are busy on other, more important products "for darsen."

Members of the Syracuse Movie Makers' Association, however, have been getting around these difficulties by synchronizing picture and sound disc by means of light-flashes! Using a stroboscope-disc like the one illustrated on our records, and illuminating it during recording and projection by the intermittent-flashing light spalled from the projector (either 16mm. or 8mm.), we've been able to keep picture and sound so accurately synchronized that musical accompaniment, narration, and even lip-sync dialog unroll almost as smoothly as though they were sound-on-film.

Using this system, only a minimum of equipment is needed, and most of it can

be found or purchased for a very low dollar. Among the needed equipment is a 33 $\frac{1}{3}$ rpm turntable motor and turnable capable of playing a 16-inch disc, a pickup with a long arm and with from one to three ounces needle pressure; an amplifier, or a radio with a pickup attachment; a speaker with about thirty to fifty feet of voice-coil line to run to the amplifier or radio, a case to hold the amplifier and pickup unit and also one for the speaker; and the stroboscope disc shown here in the illustration.

It is not necessary to own a recording unit, although if you own one, the expense of making the recordings may be saved. However, in any city there is almost always a good recordist who will be willing to record a 16-inch disc for a maximum of five dollars per disc, which is a little more than the cost of a single one hundred foot roll of black-and-white 16mm film. And the 16-inch disc will "hold" a full 400-ft. picture.

The 33 $\frac{1}{3}$ rpm turntable-motor will probably have to be purchased and if size of the dual-speed variety (33 $\frac{1}{3}$ + 78 rpm) is obtained, it can be used for playing regular commercial records in addition. The important fact in selecting the motor is that there should be no wavers or "worn" in tone on playback at 33 $\frac{1}{3}$ rpm if music is to be used in the finished recordings. A weighted 12-inch turntable (or larger) is advantageous as it will help smooth out any motor irregularities that may develop later.

The pickup may consist of one of the cheaper type crystals using needles, or the more expensive, but longer lasting permanent point type. The author started out with the former, but later purchased a cartridge with a sapphire permanent point. This was mounted on a wooden block and used the former pickup-arm which was counterbalanced to make up for the increased weight of the new cartridge. Inasmuch as crystal pickups are mostly of the high-impedance type, the wires from the pickup to the amplifier should be as short as possible, and should be shielded. Otherwise a very noticeable loss of "high" above 4000 cycles will occur and that is liable to be introduced. Of course a magnetic pickup may be used with a low impedance output, but good magnetic pickups are rather expensive. In selecting the pickup, it might be said that from the standpoint of quality there are several different grades on the market today, and if a poor pickup is purchased, the quality of the sound cannot be improved beyond the range of the pickup, no matter how good the amplifier or speaker may be. For this purpose it is advisable to obtain a pickup with a flat frequency response of from 30 to 5000 cycles and preferably to 7500 cycles. At present there is a pickup on the market with a fairly flat range up to 15,000 cycles and which sells at the same price as the former two types, but unless the amplifier and speaker are of the high-fidelity type, nothing can be gained in increased range by its purchase.

The amplifier may consist of a radio with a pickup attachment or phono in-

put; but for those ambitious amateurs wanting something better, an amplifier can be very easily built from standard blue-print designs either by themselves or by a radio-minded friend. The watt output or power need not be great for average use, but the amplifier should have fairly flat frequency-response characteristics up to at least 7000 or 8000 cycles.

It is not necessary today to have large, bulky amplifier units, for with the new tubes on the market at present, units may be built that are small in size, and more efficient from the standpoint of quality and power than the big amplifier units of a few years back. However, it might be wise to check on the availability of the tubes intended for use, as standardization due to the war has occurred in the radio industry—and while you might be able to get at most any type of tube now, replacing non-standard ones might be quite a problem later.

The amplifier should have both volume and tone controls. If both the high and low ends of the sound-frequency curve can be controlled separately, abnormal bass may be eliminated as the recording is played near the inside where lots of "high" occur, and the scratch level may be reduced as the recording wears through repeated use.

The speaker for the average home may be an ordinary large-size radio speaker or one such as used in small public address systems. For outdoor use or in halls of any size where audiences are liable to be large, a 12-inch speaker or larger should be used.

There is some debate as to whether the "pm" or permanent magnet speakers are better for this purpose than the dynamic speakers. However, the author feels that if a dynamic speaker can be used, it will be better from the standpoint of quality—and for home or small hall use, is superior to the "pm" type. Using a dynamic speaker means that a three-wire cable will have to be run from the amplifier to the speaker instead of the usual two as in the case of the "pm" type. One wire of the three-wire cable will run to the high side of the voice-coil; the second wire to the high side of the speaker field; and the third wire will serve as a common negative for field and coil. The cable may be any length, but about 50 to 60 feet will be all that is necessary for most instances. If you expect sometimes to have to show your films in a large hall, you can zapple yourself with an extension which can be added to the regular cable for these occasions.

In using this set-up the speaker matching transformer will be mounted in the amplifier. To connect the speaker-cable to the amplifier a five-prong plug should be used, the two extra prongs in series with the A.C. being shunted so that the A.C. current of the amplifier will be broken if the plug is accidentally pulled out while the amplifier is in operation—thus preventing the blowing of condensers in the amplifier.

The speaker may be placed in a case



Top recording, with screen also in place. Bottom, speaker and recorder set up for synchronized recording. Middle and bottom set up for unsynchronized projection.

net or case of any design wanted, although the full efficiency will only be realized when it is properly baffled. A small case with "barn doors" or folding swing-out sides will give a maximum of portability and efficiency.

If the screen used is of the porous type such as theatrical motion picture screens are, the speaker may be placed behind it; otherwise the speaker should be set out either above or high to the side of the screen so that loss of "high" through absorption by the screen material will not result.

The case for the turntable, pickup and amplifier may be built of three-ply plywood, obtainable from any lumber-yard, in any design or dimensions wished. However, when finished, it should be portable and so constructed that it can easily be placed on a table or stand

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FIRE-BOMBS AREN'T THE ONLY SUBJECTS FOR DEFENSE FILMS!

By W. G. CAMPBELL BOSCO

THE recent achievements of some of the more progressive amateurs and amateur clubs in producing pictures to disseminate information vital to effective civilian defense is a pointer to the way in which the talents, equipment and enthusiasm of America's 16 mm. movie-makers, both amateur and professional, can be turned to patriotic purpose. These pictures are of vital interest to all of us, even though we hope we'll never need to put into actual practice the information they convey.

Very naturally, most of these first amateur-made Civil Defense pictures have dealt with the handling of incendiary bombs and the areas they cause. But if you've made one picture on this subject, or found that your local Defense Council didn't feel it needed any films in addition to the incendiary bomb films already available, don't think that this exhausts the possible Civil Defense subjects waiting for your camera! There is a very great need at this time for films on many other subjects which can be genuinely helpful in presenting civilian interest and cooperation in the plans being taken for home defense. Among these less spectacular but needed subjects may be mentioned rescue work, evacuation,

salvage, conservation of all sorts of materials, facilities and resources, and scores of other subjects.

In this job of educating the populace on their wartime duties and responsibilities through the use of 16mm. motion pictures there is a part for both the organized advanced amateur group and the professional 16mm. producer. There's no need for overstepping of effort or coverage, for these will inevitably be some subjects which can best be handled by the amateur—especially where local facilities are necessary or advisable—and others which will naturally call for the greater skill and facilities of the 16 mm. professional.

Speaking generally, the amateur will do best to confine himself to the making of pictures that require a comparatively simple treatment (usually without synchronous sound, though it will probably be necessary to plan on post-recorded narrative sounds), and which can be handled within the limits set by the amateur's camera and lighting equipment. The professional, on the other hand, can tackle the more difficult subjects. Actually, there is no reason why capable 16mm. amateurs and 16mm. professional's in the same region can't work to-

gether to the extent of assigning to each the type of picture best suited to his resources and ability. Today we can all do us afford to place less stress on personal and professional standing, and work together to answer the country's demand for more and better Civil Defense pictures!

First of all, find out what are your community's particular Civil Defense problems and needs. Get in touch with your Defense Council, Red Cross, Salvage Collection Committee, and other agencies. They will tell you what information they most want brought home to your fellow-citizens, and where you can be most useful. Once in a while you may run into the store wall of petty personal or factional political jealousies; but in most cases, these officials will welcome all the help they can get. They realize that in the event of any emergency, they have a grave responsibility, and they know that their task will be greatly lightened if the public knows beforehand what to do. They'll appreciate it if you can help get their "what to do" message over to the public with a well-made motion picture.

Don't think anything is too simple to ever be detailed in a film. For example, a very useful film that could be made in almost any community would be one to introduce pictorially the neighbors and friends in the community who are quietly serving as Air Raid Wardens, Fire Watchers, and so on. Most of us know that some of our neighbors are doing this work, but the majority of us probably don't know who they are, or where they can be found in an emergency.

The scenes from a film like this should be more than just a "take-a-hew" introduction. They can show as well what the average citizen should do—and what he should not do—to best cooperate with his local Defense Officials.

Most of us know that there are emergency first aid stations in almost every community. But very few of us know where they are. Your local Red Cross Chapter, as well as the Defense Council, will certainly welcome your help in making a film on these activities. They'll help you, too, to make a film that will show John Q. Public "what to do till the doctor comes," and again, what not to do.

First aid films like these can be made highly detailed and scientific, if you've the inclination and the skill, and even aimed at detailed instruction of specialized groups. Or they can be strictly elementary and aimed simply to teach the general public how to put on a tourniquet and where they'll find their neighborhood first aid post.

Then there is the need for salvage—why we need it, and what it is and what is not acceptable in the salvage-collection campaign. In the proper season, there's a ample need for films about the importance of growing as much food as possible in Victory Gardens; but we're less likely to realize that there's an equal need for films about the how and why of preserva-

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THERE'S nothing really wrong with the average home movie of children—except the people who try to make the pictures! Left to themselves, children are probably the most completely natural actors in the world. The strangeness you see so largely displayed in most films, and even films of children can be blamed squarely on the fact that the children weren't left enough to themselves.

Most amateurs, when they try to film children, seem to go to one or the other of two extremes. Sometimes they try to direct their young actors so emphatically that they "direct" all the naturalness out of them. In plain English, they confuse or even scare the child. Some, on the other hand, don't direct their subjects at all. That leaves the child in a situation which would be embarrassing enough for an adult, and is almost terrifying to a child, having to ad lib some action—any action—for the camera, with no reason for what they're doing. In either instance, the result on the screen is so different as possible from a really natural picture of that youngster.

The real secret of directing either children or adults is to put them completely at ease, while at the same time persuading them to do what you want them to do. And—equally important—always give them something interesting (and natural!) to do.

It's a far too common fault in all adults to underestimate a child's mental capacity just because he is a child. Yet I've found in both my professional work at the studio and in my own home movies that if a youngster knows what is to be done in a scene, and understands why, his natural dramatic sense will enable him to do it, and usually better than any adult could foresee!

Remember, one of the most deprecated of all human instincts is the instinct for self-dramatization. In newspapers, it manifests itself in the legitimate "dressing up" of wearing make-up, costumes and lodge regalia. In children, it finds an almost continuous outlet in the thousand-and-one dramatizations of play. If you've ever watched your own children playing, you must have noticed it a child very seldom plays himself, but always impersonates some other character—a soldier, an aviator, a cop, a gangster, or, lately "Superman." The wise director is the one who can take advantage of this to make movie acting a joyous game for the children.

But, on the other hand, don't inject your adult concepts too much into this game! That only crushes the children's style, and leads to a stiffly unnatural picture. For example, we've all known amateurs who dress their children up in miniature adult attire and make them do imitations of adult stories and actions with the mistaken idea that they're "cute." To my mind, this robs the children of their greatest asset—naturalness. It may make them look "cute" (that's debatable, by the way!) but it



How To Get BETTER MOVIES OF CHILDREN

By **NORMAN TAUROG**

usually makes them feel ridiculous. They show it on the screen, the picture is almost always stiff and posed.

If you must direct the children up, let them dress up in their own way, and as something that fits in with their natural play. For instance, most youngsters these days go through a phase of playing at being some favorite screen or fantasy-page hero like "Tarzan" or "Superman." Let them play that—preferably in costumes mostly of their own devising—and you'll get a really enthusiastic performance, and a natural one, as well!

While you're making it clear to the youngsters what they're to do, don't make the mistake of showing them what to do literally. Don't step in and set it out for them. If you do, I've found, you don't get what you want. Instead, you get the child's imitation of you doing the part, which will be most unnatural.

Tell your young actors what to do, and then let them figure out their own ways of doing it. And don't try to shove them around into the position you want. That sort of treatment simply freezes them. If you can't get them into the exact places you've pictured, it usually doesn't matter; and it's easier to change your camera angle than to "booster" up

a youngster who has been pushed into position.

For the same reason, don't let yourself get excited. Keep extremely calm, even if you don't feel that way. Even with grown-up, professional actors it's bad business for the director to throw a temperamental tantrum, with children, it's fatal. Once you've lost your temper, you might just as well stop shooting for the day, for with a cast of nervous children, you'll certainly get nothing worth while—and film, these days, is something not to be wanted!

Even with adult actors, too much rehearsal tends to rub away the spontaneity. With children, it rubs off the sugar-coating of "let's play a game" that you've tried to give the task of movie-making. My advice is to content yourself with one or, in extreme cases, maybe two rehearsals, and then shoot, while the children still feel it's a game.

Up to a certain age, most children are gradually oblivious of the camera. Then they suddenly become aware of it. And there's nothing more unnatural than a camera-conscious child. If you have a telephoto lens, you have the answer to this problem, however, for you can get

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Study the action on a viewer and see how much the viewer is a cut

Are Your Pictures PRECISION EDITED—?

By ROBERT PITTACK, A. S. C.

YOU may think your pictures are completely edited. But—are they?

Judged by the standards of studio film-craftsmen, the average amateur movie, which its maker proudly considers completely edited, is only in the "rough-cut" form. It doesn't flow along on the screen with the smoothness of a really completely edited picture; there are overlaps of action at the beginnings and ends of scenes; there are little tags of unwanted action at the start or finish of other scenes; and there may even be scenes—usually scenic shots—which are repetitious, or which aren't arranged in the best order.

Remedying these little faults will put the final polish of perfection on any picture, new or old. It's painstaking, detail work, though, and usually involves thinking of cuts in terms of inches or even frames, rather than in feet or complete scenes. It isn't easy, but this "precision editing" is one of the most important things in turning out a really good picture.

The chief tool you'll need in tackling a job of "precision editing" is a good viewer, preferably of the motion-image type. In a pinch, you can use a projector and a small screen if your projector is one capable of projecting both forward and backward, but a viewer lets you do the job much easier and more accurately.

In addition to the viewer, you'll need a really good splicer—and plenty of patience.

The first step is to project the picture once or twice, carefully watching for these little blunders. Unless you've a good memory, you'd better make notes on such as you come to it.

What are the points to watch for? Well, first I'd watch for little points at the beginning or end of scenes where you may have exposed six or eight frames (sometimes less) of a scene before or after the really important action took place. Even a two-frame flash like that can be irritating on the screen. Sometimes you'll start a take and im-

mediately remember that your focus or lens wasn't set correctly, or discover that the action isn't right, or even that you forgot to wind the camera. Anyway, there you are with a few frames of the picture recorded on the same spot, but not actually your real scene.

Or you may find that when you cut from one camera-angle to another, your action overlaps. No—there's nothing wrong with shooting your scenes that way; in fact, it's the correct thing to do, for it gives you a better chance to match the action of the two in cutting them together. But all too many amateurs forget the importance of precision-cutting the action when they join the two scenes.

As an example, a very common action in both amateur and professional pictures is a shot of someone going through a door. Often we'll show it in two successive cuts: one made from the inside of the door as the person (back to the camera) approaches it, opens it and walks through, and the other made from the other side of the door as the actor, now facing the camera, opens the door and walks through into the next room.

It should be rather obvious that we don't want to splice these two scenes together without any cutting. If we did, we'd show the person walking through the door, then apparently jumping back, reopening it, and walking through again. But many amateurs don't realize that it is almost as bad if a cut like this the action jumps forward or backward only a few frames. On the screen, it makes a little mental jerk which—if for only a few seconds—jerks the audience's attention away from what's happening on the screen, and creates an irritating consciousness of the mechanism of the job.

Here's where the viewer proves its worth. By running first one scene and then the other through the viewer successively—and preferably slowly—you

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A splicer to carry an extra reel, like the one made by Sgt. Bob Toney of the U. S. Army Club, is useful in accurately matching scenes to be spliced.

FILM CONSERVATION and SUBSTANDARD FILM

DURING the last few weeks we have received many inquiries from individual amateurs, from amateur clubs, and from 16mm professionals, asking what is the effect upon substandard film and fixing of the recent Government Order "freezing" motion picture film. We feel that our readers are entitled to a frank statement of the facts, based on the most authentic information we have been able to obtain up to the time of going to press.

The present order "freezing" motion picture film, and the rationing procedure announced as shortly forthcoming, apply solely to 16mm motion picture film. The text of the order specifically excludes 35mm film packaged for amateur still cameras, and makes no mention of 16mm and 8mm film.

We are informed that a substantial cut has been made in the amount of substandard film delivered by the manufacturers for sale through the normal channels. But up to the time of this writing, there has been no indication either from Government sources or from the film manufacturers that 16mm and 8mm film is to be "frozen" or rationed. There will be less of it available than heretofore, but it will still be available through the usual channels.

There is therefore absolutely no reason why any user of 16mm, or 8mm film, whether amateur or professional, should attempt to lay in an undue supply of film against the possibility that it may be rationed or become unavailable. Indeed, such hoarding is to be strongly condemned. Not only is any widespread hoarding of substandard film at least potentially likely to bring about the restrictions we all wish to escape: it is definitely wasteful, for film that is kept over-long deteriorates, and in time becomes worthless.

We do not personally believe that the Government or any of its officials or agencies have any bias against the amateur film hobby, or any wish to kill it off by unnecessary restrictions on the availability of film. Indeed, many of our high Government officials are known to be enthusiastic cine-amateurs in their private lives, and may be expected to look favorably upon the hobby.

There is, however, a definite reason for the present "freezing" of 16mm film, for the restricted output of substandard film, and for any rationing or restriction on the sale or use of substandard film which might conceivably come in the future. We are convinced that once the amateurs and 16mm professionals

of America appreciate these reasons, they will gladly cooperate in any measure which may be taken for these reasons.

Our country is at war. In that war, a greater and more widespread use is being made of motion pictures than ever before in history. Our Army is expanding incredibly, growing almost overnight from a peacetime token force of a couple of hundred thousand to a wartime army of millions. Our Navy, Marine Corps and other services are expanding similarly. This means that literally millions of our fellow citizens must be trained, and trained efficiently and rapidly, from civilians to first-class fighting men, in less time than any other nation ever attempted such a mobilization.

As we have brought out in this magazine on numerous occasions during the past year and a half, a very great part of this training is being expeditiously by motion pictures. The Army, the Air Force, the Navy and the Marine Corps are making hundreds of training films in their own training film studios; the motion picture industry is making hundreds more for them. Literally thousands of release-prints of these training films are being made so that thousands in all of our far-flung military training establishments may have the advantages of the same expert instructor.

These films are being photographed principally in 35mm, but virtually all of the release-prints are being made in 16mm, for obvious reasons. In addition, virtually all of the Armed Services are using motion pictures, both 35mm and 16mm (including Kodachrome) for purposes of research, record, and combat camerawork.

This means that the film-producing facilities of this country have to face an absolutely unprecedented demand for motion picture film. These facilities, as we all know, are tremendous. They would have to be to meet the professional industry's 2,600,000,000-foot-per-year annual requirements, and in addition cope with the constantly increasing demands of the substandard professional and amateur fields.

As we understand the situation, the manufacturers give no indication that there is any shortage in the raw materials for making film. But there exists a serious bottleneck in film-coating capacity. Film-coating machines are intricate, expensive, and exceedingly slow to get into production; it takes over a year from the time one is first planned to the

time it is coating film on a production basis. In addition, each such machine uses a considerable amount of critical materials, not to mention personnel, machine work and manpower.

The ease of the situation, then, is that present film-coating capacity can handle the country's normal peacetime demands for film, and it can handle the excessive military demands; but it cannot do both at once.

Obviously, the needs of the military must come first, for if any shortage of film developed in that direction it might slow the training programs of our Armed Services, or result in the serious crime of sending American soldiers into action less completely trained than they might have been.

The professional motion picture industry, as the world's greatest institution for mass entertaining and morale-building, is rightly regarded as essential. But it must and is willingly taking second place to the needs of the Armed Services.

Makers of 16mm industrial training films, Civil Defense subjects, and the like, are certainly performing an important service to the nation. Yet amateurs, so long as they use their film and camera wisely, can play an important part both in disseminating useful information and in keeping up morale along the most literal home front. It is only fair that these users of substandard film should get their film, but they must naturally yield precedence to the more directly essential users of film.

None of us can predict what may come if the government officials whose fingers are on the ebb and flow of supplies deem it necessary, curtailments and restrictions of substandard film will come and come swiftly. But we have an idea that the matter really rests with the users of substandard film themselves: if they use their film wisely and conservatively, and avoid unnecessary hoarding, cheerfully accepting the necessarily reduced output of 16mm and 8mm film, they should be able to continue their hobby for quite a while—perhaps even "for duration." If they don't—if they as a whole in any small part of the whole—should unnecessarily deplete the country's supply of substandard film just from panic—we may expect the proper authorities to take such steps as are necessary to protect the Nation's best interests.

So—for the present, our hobby is in no danger! Let's keep our heads and face the future like Americans! END



How would you get the best to get the girl's hair sharp in a scene like this?

Test YOUR Movie Knowledge!

A Cine-Quiz. Edited by
ORMAL I. SPRUNGMAN

INCREASING popularity of quiz programs inspired Ralph Sprungman, retiring president of the Minneapolis Cine Club, to compile a question-answer quiz for use of the club's recent program. Here are 25 of the tougher ones. If you're a cine filmer, try your hand at these, then turn to page 408 for correct answers and rate yourself as a movie-maker as follows:

21-25 Top-notch
16-20 Well advanced
11-15 Average
Below 10 Beginner

- 1 Which of the following are known as substandard movie cameras?
a. 8mm
b. 16mm
c. 35mm.
- 2 An overexposure in outdoor photography is the result of
a. Too much light
b. Too little light
c. No light at all

- 3 In photography, birds are used to
a. Prevent films from being light-struck
b. Protect cameramen from being charged by wild game.
c. Hide the cameraman from his quarry
- 4 When a heavy filter is used over the lens in photography:
a. Exposure must be decreased
b. Exposure must be increased
c. Make no change in exposure
- 5 Movie titles are essential to every silent film. These should be cut into the movie:
a. At the beginning of a sequence
b. At the end of the sequence
c. Anywhere the title happens to fit.

The following true-false questions may be answered by simply marking T or F.

- 6 Depth of field is affected by exposure regulated by diaphragm opening.

- 7 To make silhouettes, expose for the darkest part of the scene and deliberately overexpose the lighter parts.
- 8 When using a wide-angle lens, all objects appear larger than when using the standard lens at the same distance.
- 9 When filming objects reflected in a mirror, measure the distance from lens to mirror.
- 10 A movie camera should record action rather than provide it.
- 11 Outdoor Kodachrome film cannot be used indoors satisfactorily.
- 12 There are 80 individual frames on each foot of 8mm film.
- 13 When splicing duplicate film into original film, the emulsion sides must be away from each other.
- 14 All objects reflect the same amount of light under the same kind of sky.
- 15 In projecting 8mm and 16mm reversal films, the emulsion side must face the projection lamp.
- 16 Some telephoto lenses may be used for extreme close-up work as well as bringing in distant objects.
- 17 A polar-screen has no effect when shooting away from or directly into the sun.
- 18 8mm and 16mm film require different exposure rates.
- 19 Framing not only adds contrast to scenes but helps to give the picture greater depth.
- 20 Early morning or late afternoon filming often results in under-exposure.
- 21 Subjects taken against a light background are most frequently overexposed.
- 22 A f 3.5 lens is not as efficient as a f 3.6 set at f 3.6.
- 23 The best human close-ups are made in the shade where plenty of light is available and persons are not subjected to direct intense sunlight.
- 24 Increasing the focal length of a lens increases the field of vision.
- 25 A focusing camera can be used as a food focus by setting distance at 25 ft. and using a small stop.

Take Your Camera To School!

By PHIL TANNURA, A.S.C.

IN this day of visual education, there's a definite place in almost every school from kindergarten to college for a well used movie camera. Supplementing the professionally made educational reels that are a part of every school curriculum, personalized films that record in detail the progress of the various practical projects of different groups or classes, or of the school itself, have real value both as educational aids and as lasting records of accomplishment.

School budgets being the slim thing they are, though, very few schools can boast a camera or an "official" cameraman among the regular facilities. But—there's no reason why a concerned parent, teacher, or even a movie-making pupil can't volunteer his services as the school's non-official camera reporter for the coming school year. I've known of several who have done it very successfully, and in the process found a new world of interesting (and sometimes technically perplexing) movie-making subjects.

You'll very probably have to exercise more than a little diplomacy getting started, though. Schoolteachers and principals usually have to keep a wary eye out for criticism, sometimes from old-fashioned parents of their pupils, sometimes from particularly conservative souls among their superiors, every time they depart from the strictly-outlined path of the three R's and seek to try any innovation. But once you manage to "sell" them on the idea and on your own ability to stay with the project and deliver a worthwhile picture, you'll find most pedagogues warmly—if not always warmly—cooperative. During this "selling" process it's not a bad idea, by the way, to point out to teachers and principals the personal prestige they'll get among their associates by being the teacher in such-and-such school who made a movie of that particular project!

More often than not, you'll find you'll have to provide the film yourself, though some schools may have a budgetary setup which would permit them to provide the film, or at least split the load with you. And if, when the project is finished, you find you've a film you'd like to keep, it's essential to give the school a chance to buy a duplicate of it. They usually have provisions for buying films to add to their visual education libraries, and can "shoot" a lot to permit buying a print of their own picture.

Once these details are arranged, you'll find plenty of material to shoot, no matter whether your filming-ground is a primary school, a high-school, or a university. In fact, you'll have to choose carefully which projects you can film, instead of trying to film everything that is going on.

As a rule, I think the best idea is to pick out particular project, and stick with it consistently enough so that you'll be able to make a complete film record of the project from start to completion. This will almost certainly mean you'll have to keep yourself as ready as a fire-horse, so that you can dash out to the school and film a needed scene when it's happening. You won't get many opportunities to "stage" things on your own time!

One of my friends, for example, got interested in making school film records of this sort while his children were in school, and became so wrapped up in it that he got into the habit of keeping his camera, loaded, in his office so that when ever he got a call from the teacher, he could drop everything, grab his camera, and dash out to shoot while the shooting was good!

The best subjects, I think, are those where the pupils are doing (in the physical sense) something constructive. In the early primary grades, for example, modern teachers teach many subjects by having the children actually make and do things connected with that subject. For instance, if they're studying about Indiana, they may make themselves Indian head-work, and stage Indian ceremonial pageants. If they're studying about pilgrim or colonial days, they spend several weeks, perhaps, at various types of early American handicrafts, and so on. All of these are fine movie subjects, especially if you do a complete job of coverage, so that you show the project from start to finish.

In the higher grades, there are still definite handicrafts. Particularly at present, thousands of school manual-training classes instead of turning out foot-stools and bread-boards which may or may not be useful at home, are making scale-model airplanes to aid the Army and Civilian Defense programs of training soldiers and civilian spotters in aircraft identification.

In the high-schools (not forgetting, I hope, the many night extension high schools for adult education) there are



A school movie should have plenty of dramatic shots showing what the children are doing, also shots of instructor and pupils, and clean reaction shots. Upper two photos, from assignments by Anthony Cape and John Ross.

particularly fine possibilities right now in the many classes in shop and business subjects which are preparing students, both adolescents and adults, for service in our wartime armament and allied industries.

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SHOOT THE LITTLE "BIG GAMES"

By HENRY SHARP, A. S. C.

FIRST GLANCE indications are that this wartime football season is likely to be a slim one for camera-toting football fans in many parts of the country. Necessary military restrictions in many areas drastically limit the size of crowds, so it is not at all certain whether Mr. Average Follower will even get a chance to get into the stadium. In all sections, draft and enlistment have played havoc among college football squads; surprisingly many of last year's "name" players won't be playing this year. Instead, they'll be carrying the ball in tanks and Flying Fortress.

But that doesn't mean you won't have a chance at football filming. In fact, if you play your cards right, you may find you can do more of it than ever before, and get the sort of pictures you've wished for, but never before been able to get.

There's a string attached to it, though. You may have to forget the pursuit of big-time teams and "name" players, and devote yourself instead to getting action pictures of football for the sake of football!

In other words, if you can't get into the usual big games, take a try at filming the little "big games"—the high-school and prep-school games that only rate a paragraph or so on the back pages of the sports sections. Most of them, you'll find, pack more genuine action and football thrills into their playing time than you'll find in a dozen bigger games. Except in the bigger cities, these teams aren't scouted as exhaustively as college teams are, so they don't know each other's every play before it happens. There's less conservative playing than is often the case in big-team contests, where so much hangs

on victory. And enthusiasm—the "old college try" is but a pale shadow of the zeal you'll see expended on every play in these little "big games."

From the photographer's viewpoint, there are other distinct advantages. The crowds at these high-school games—especially away from our bigger cities—seem actually smaller, and much more informal. If you ask permission in the right quarters, you're very likely to have the privilege of setting up your camera right on the sidelines, rather than having to content yourself with a seat half a mile or so up the side of a big bowl.

This directly simplifies your photographic problems. You won't have to use a telephoto lens, for one thing. Very few of us have telephotos powerful enough to meet all the requirements of big-stadium cinematography, anyway. Just shooting from the sidelines, you can use your normal lens, or even a wide-angle or a Hyper-Clear, if you have one.

If you're a wide-angle obsessive, your focus problems will be nil. If you haven't one, I'd suggest using the normal lens on your camera as a fixed-focus objective. Set the focus at the 15-foot mark, and when you're stopped down to the aperture you'll usually use outdoors on a bright autumn day you'll find the 23mm lens of a 16mm camera will carry from about 5½ feet to infinity, while the 12½mm lens of an "eight" will do even more than that. No, you won't have to worry about focus! Exposure-metering problems are easier, too, when you're working at normal distances.

Following the action is another matter. Working from ground level on the sidelines, your best bet is to hold the camera in your hand, so that you can follow the

play up and down the field just as the players do. When the play is out toward the center of the field, or over on the other side, get as nearly on the line of scrimmage as you can. When the play comes over to your side of the field, step back a yard or so from the sidelines, and place yourself three or four yards or more ahead of the play—that is, behind the defending team. When the play gets into that critical territory down by the goal-line, a position right along the goal-line is usually best. That way, your shot will tell accurately whether or not the ball went over the line. When goals are to be kicked, or you've a suspicion that a place-kick is coming up, a shot made from behind the goal-posts may be very effective. But don't get too close, or you may find yourself overwhelmed by an avalanche of football players!

That, by the way, applies also to positions on the sidelines when the play is toward your side. Be prepared to jump—and fast—in the event a ball-carrier is forced out of bounds in your vicinity.

Working from the ground level this way, your best bet usually is to shoot from a standing eye level, which gives you the best perspective on the play. Once in a rare while you may want to kneel for a low-angle shot when the play is coming close to you, but don't do it often, for such angles won't give a very good idea of the play itself, and besides, it's too hard to jump clear from a kneeling position if you have to get out of the way quickly!

Speaking generally, your best bet is to follow the ball as consistently as you can. This is easy on passes and kicks, but awkward on running plays—especially fake reverses and the like—you may get fooled. A wide-angle lens, which lets you get practically the whole play into your frame, is a life-saver here.

When you see that one team is particularly lucky with its passing game, it's well worth while to drop behind the offensive team for a few shots that will show how they protect the passer, and then to make a few more from down the field, showing how the receivers get down there, and how they are protected. Similarly, I think that on shots of long runs, your picture will have much more interest if your camera-angle is wide enough to show the work of the interferers, rather than concentrating, via telephoto, on the ball-carrier.

In any event, you'll have to develop that instinct that all good sports-camera-men have, of diagnosing the play rapidly, and adapting your camerawork to it. Using a normal or wide-angle lens of course helps in this, because you'll usually have the whole play in your field, and won't have to follow so much.

Since your camera is hand-held—and it's got to be if you're to move rapidly up and down the sidelines with the play—you'll usually do well to shoot at 24-frames speed instead of 16, to minimize the unattractiveness that can't be separated from hand-held camerawork. Once in a while a faster slow-motion may be in-

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IN most parts of the country, the autumn months are the most colorful of the year. The changing reds, oranges and yellows of the autumnal foliage are a constant invitation to ex-pose Kodachrome. People talk about "spring fever"—but it's nothing compared to the urge that comes in the fall to most cinefilmmakers to take their cameras out in the country and shoot for autumnal color.

But this year things are different. Trees are scarce and grassless, in many regions, even scarcer. The riotous fall colorings may still be there—so is the urge to shoot them—but the usual means of getting out there is likely to be sitting in the garage in storage.

However, that still doesn't keep us from taking cinematic advantage of these colorful subjects. Only—we've got to change our technique one way or another.

One way to do this is to change our method of getting to our cinematic stamping-grounds; another is to change our stamping-grounds. It may seem surprising to many of us who have habitually used the family car even to go to the corner store for a packet of smokes, but there are such things as steel-cars, motorbikes and buses. And they're still running. Often they'll take us at least to within striking distance of potentially worthwhile countryside.

Similarly, we hear a lot about rail-road transportation shortages, but these seldom rest on the little branch lines. And these little-travelled branch lines are just the areas most likely to take us out into the land of shooting country we want to reach. Even in such a thoroughly metropolitan area as that around New York City, you can discover several dozen of these little branch-line trains which can take you in an hour or so out into such rural placidity that you realize "Forty-five Minutes from Broadway" can be a lot more than just a song. I won't say you'll find the "Suburban George M. Cohan song about, but you'll find rural subjects that will delight your eye and keep your camera going as long as you're an inch of unexposed Kodachrome left. If you don't believe me, just study up a bit on the little branch-line trains in the Unstates, and spend a holiday or so learning where they go!

If you can't leave the city, there are always the parks, to say nothing of the more familiar tree-shaded thoroughfares. And a touch of autumnal color on lawns—even the most familiar scene into something seemingly new and decidedly worth filming.

You could make a very interesting picture, for that matter, centering around the coming of autumn to your own neighborhood. It's still early enough so you can get an opening sequence showing the neighborhood foliage still in its early-fall greenery. Then show the first touches of fall colorings, using both long-shots and close-ups, and of course taking due care to contrast the trees with colored foliage against those as yet



AUTUMN BYWAYS— IN COLOR

By SID HICKOX, A.S.C.

unchanged. Carry this through as more and more trees and shrubs put on their autumn clothes. For human interest, you can build up little sequences showing the neighborhood children getting ready for school, and starting in again at their classes and homework. Sequences of the wife getting or making her fall outfit, and of father laying in the winter's supply of coal are "naturals," too. These human sequences should naturally be punctuated with scenes of the increasing spread of fall coloring.

Then might come the first falling leaves, followed by shots of the neighborhood lawns carpeted with red, yellow and brown leaves, shots of father spending his Saturday afternoon raking them carefully up, and finally burning them.

The picture could well conclude with scenes showing the coming of the first really heavy autumn winds and, if you're lucky, the first snowfall, perhaps lap-dissolving into a shot made much later, showing the neighborhood at last in the snowy grip of winter.

This, by the way, suggests several ideas which would be highly effective on the screen if you've the patience and persistence necessary to work them out accurately. For example, a series of lap-dissolved shots of the same tree, or the same neighborhood, or even of your home going through the transition from early fall's greenery through the varied colorings of autumn to the stage of dropping leaves, bare branches and finally soft, white snow, would be extremely effective.

You could make a sequence like this easily enough without tiring up your camera, too. Simply mark a starting point at the beginning of the roll, and measure and record the footage of leader, and of each scene and dissolve thereafter. Each time you finish a scene, take the camera into a darkroom and care-

fully rewind the film, so that you can shoot other pictures on other rolls until the time comes to film the next shot in your lap-dissolved sequence. Then, of course, thread the camera with the marked starting-point in place, and run the film through with the lens capped until you've run off the footage that will bring you to the point where you stopped shooting on the last take. Back in the old days, I've known professionals who, making a sequence like this, held their film for more than six months, making such partial exposures as the opportunity presented itself.

It will help, too, if you use a tripod for these scenes, and mark the exact position of the tripod with pegs driven into the ground. Thereafter, you can get the camera very accurately back in place by lining up the tripod-legs with these pegs, and of course measuring the height of the lens from the ground, so that it stays the same.

The general technical treatment of autumn scenes in Kodachrome is simple. Whenever possible, frame your compositions so you can take advantage of color contrasts to give you interest and depth. Contrasting a brilliantly red or yellow-leaved tree against a nearby one with dark-green leaves is always effective.

Since you have color-contrasts to help you out, you won't need to make as much use of lighting contrasts as you would ordinarily. Simple flat and cross-lightings are all you'll need most of the time. However, occasional back-lighted shots—especially of trees with light yellow leaves—can be tremendously effective. So, too, can close-ups of individual leaves.

If you're a real master of exposure-metering, you can accentuate some of these effects to good dramatic purpose. Begin the picture with normal exposure

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NOW that a new season of movie-club meetings is beginning, it seems like a good time to give some serious thought to the matter of projection, for more than almost anything else, the way a picture is projected can make or mar the impression it makes on its audience. Haphazard projection of the "let's-set-up-the-projector-and-run some-movies" type may be all right when one or two movie-making couples gather informally at home to preview someone's latest reel, but at movie-club meetings, whether at not they're open to outsiders, projection should be handled as expertly as any other phase of the movie hobby.

Thus, by the way, gives me a meaty bone to pick with a lot of movie-club presidents. I'd like to know why it is that when meeting presidents get around to appointing the projection committee, they so often seem to appoint members—often new ones—who may have lots of enthusiasm, but darn little knowledge of how to work a projector? Believe it or not, I've really known of at least one case where it was found that a club's newly-appointed projectionist was so new to the hobby he didn't even own a projector—much less know how to run one! As I look at it, the post of projectionist is one of the most responsible in any movie club, for the projectionist is not only responsible for the smoothness with which the show goes off, but he stands a fair chance if he doesn't know his business, of ruining irreplaceable film. Certainly, it's no job for a greenhorn.

The projectionist ought to be one of the first arrivals at a meeting, so he can get his projector, screen, and sound-equipment (if any) set up and ready to

PLANNED PROJECTION PAYS!

By THOMAS TUTWILER, A. S. C.

go well before the meeting starts. Nothing so detracts from the smoothness of a meeting than to have the equipment set up, adjusted, and generally fiddled with while the audience waits embarrassingly for the pictures to start.

The ideal arrangement is to have at least two projectors (four, if both 8mm and 16mm are on the same programme) so that you can switch over from one machine to the next, and from one reel or picture to the next, without a break. The projectors should be pretty well watched as to optical quality, illuminating power and silence, too. Showing one reel on a 500-Watt machine and the next one on a 750-Watt one gets the film shown on the low-powered machine at an unfair disadvantage.

Changing over smoothly from one machine to another isn't difficult. Simply thread the film into the second machine with the starting frame or mass title as the aperture, and set that projector with the lamp-switch on and the motor-switch or mass switch off. Then when you see the end of the first reel approaching, you can flip No. 1 projector's lamp-switch off with one hand while at the same moment you flip the second projector's master-switch on with the other hand. The first projector's motor can keep running, to run out the trailing leader on the reel.

The projectors should be placed on a firm stand or table, behind the audience, if possible, and a bit above the level of their heads. If you can build a projector-booth like the one described a few months ago in this magazine, you'll have the perfect projection set-up. Otherwise, try if possible to get a fairly long, narrow stand or table, and place it parallel to the screen, so you can

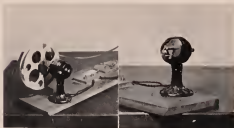
line the projectors along it with plenty of working-space between them.

Be sure to give yourself plenty of free working-space. Make it a habit, too, to put the un-projected reels in one place, and the reels you've projected in a different location, so you won't stand any chance of mixing them up. I think it's a good idea, by the way, when you thread a reel into the projector, to make it a habit to put the can that reel came from in the pile of projected film. If you've more than one projector, plan which reel goes on which projector so that you can arrange the film for each projector in a separate job, by its appropriate projector. This again saves mix-ups.

Of course it isn't always possible to plan a club's programme too rigidly beforehand, thanks to the inevitable members who promise to bring a film and then forget it, and their near relatives, the people who bring along an unexpected reel and feel bad if you can't crowd it into an over-filled evening's show. But wherever possible, it will help everybody if a written—or, better, typewritten—list of the films to be shown, and their order, can be provided for the projectionists and the member(s) if any) who accompanies the pictures from the second terrible sound outfit. The sound man should have one, anyway, even if it's only a scrawled memo, for there's nothing more difficult than to be expected to produce appropriate music for a picture when you haven't even a hint as to what sort of a film it may be.

Reversing should usually be handled by another person than the projectionist. We've all gotten pretty well in the

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A projector stand made like this can be made out of an old fan motor, and is a great help in smoothing club screenings. Make sure plenty of working space around the projectors!

AMONG THE MOVIE CLUBS

16mm. Films for Army Camps

To all Readers of
THE AMERICAN CINEMATOPHILE

The War Department, Service of Supply, contemplates the development of a visual education program for soldiers in the Army camps.

To prepare this program the War Department has need of up-to-date 16mm. films showing the geography, economic and industrial development, arts and recreation, and the home and community life of the people of countries outside the continental United States.

The War Department wishes to locate individuals who have good 16mm. films on foreign countries. If any subscribers have, or know about, material of this type which could be made available to the War Department, they should write directly to the office of Brigadier General F. H. Osborn, Director, Special Service Division, War Department, Washington, D. C. In writing to him please refer to the fact that you saw this notice in THE AMERICAN CINEMATOPHILE.

Exchanges for Syracuse

Screen fare at the Garden-party August meeting of the Syracuse Movie Makers' Association featured an all-exchange program. The pictures shown included "Happy Landings," a brightly Kodachrome scenario film loaned by Past-President Mildred Caldwell of the Long Beach (Cal.) Cinema Club; "New Hampshire on Parade," International prize-winner loaned by Fred Ellis of the Los Angeles Cinema Club, and "Prize Winner" and "Chronicle," from the library of THE AMERICAN CINEMATOPHILE. The members were particularly impressed with Miss Caldwell's use of Kodachrome for her scenario picture, and the way her story logically introduced points of interest of her home town.

D. LITTLE CONWAY,

President.

Joint Party in California

Five Southern California Clubs staged a joint meeting on August 2nd at the Seylana Lodge of the Robinson Distributing Company in Los Angeles. Represented in the turn-out of over 200 were the Los Angeles Cinema Club, the La Casa Movie-makers of Alhambra, the North Hollywood Cine Club, and the Long Beach Cinema Club. The program included items through the Anne brewery followed by a luscious "smack" lunch. Screen fare included "Behind the Mask," a Kodachrome sound film on the



Honors for Paul Francis: The Massachusetts Cine Club recently presented each of the past presidents who have served during the club's seven-year career an individual award, bearing his nameplate. The awards were turned out to the honor recipients of Edwin Siskind. (Left) of the group's roster, The Cine Clubsters' Gift to 1934 in addition are Past Presidents Harold Berman, Clifford Williams, Carroll Swenson, Leslie Green and W. R. Grant. Not shown are trophies presented Ralph Sorenson and Florence Hobbes. (Center) Made by Orval I. Sedgwick.

growing of hops, loaned by Paul Thompson, of Yakima, Wash.; "The Pecos Post," an hour production by the North Hollywood Cine Club, and a special showing of the Long Beach Cinema Club's Kodachrome sound film on intermediary lenses, "Fire from the Skies." The meeting passed one of the most enjoyable ones held by any of the participating groups.

Four a Month for Chicago

Reversing club activities with its first meeting of the season, September 1, the Chicago Cinema Club has voted to revert to its original policy of holding four meetings per month. Scheduled for September gatherings are two Kodachrome sound films, "The Amazing America," and "Citizens of Tomorrow," as well as another interesting talk by Joe Stout and Dr. H. Eugene Wells' "Fascinating Florida."

Sound Editing for 8-16

Highlight of the August meeting of the 8-16 Movie Club of Philadelphia was talk on editing a 16mm commercial sound film by George Burnwood. The Board of Experts' popular question-and-answer session was repeated by popular demand. Screen features of the evening was a screening of General Motors' 16mm Kodachrome sound-film on "India."

A special recording was made to send to the Syracuse Movie Makers, thanking them for sending "Henry's Hobby" and "The Haunted School," which were shown at the 8-16 Club's July meeting, and recording various members' impressions of these films. The meeting wound up with the showing of members' films, including some shot at the Club's Willow Grove outing.

On Sunday, August 22nd, the Club participated in a picnic held at the Valley Green section of the Wissahocken. A special script was prepared for filming on this occasion.

LEON MERROW.

Thrills for San Francisco

Thrills highlighted the August meeting of the Cinema Club of San Francisco. Feature of the evening was a screening of a 16mm print of "Target for Tonight," the famous film made by the Roverie Command of the R.A.F. "Crossing the Grand Canyon Rapids," depicting a thrill trip down the Grand Canyon in a small boat, was also shown, and Member Jack Winkler's brass Kodachrome of the Ice Palace, with due accompaniment, had its premiere.

E. L. SARJEANT,

President.

S. A. for Southern Cinema

Special feature of the August meeting of the Southern Cinema Club was a screening of a 16mm film made in South America some years ago by a missionary doctor who had access to many places far from the beaten path of camera-carrying tourists. A discussion was held on the topic of making a Club Movie, as the film shown by the San Francisco Club at the July meeting has stimulated a great interest in Club filming.

RUTH FISHER,

Secretary.

Family Night for Long Beach

August 5th was "Family Night" for members of the Long Beach Cinema Club. Family films were the screen fare, and proved interesting and in the same cases unusual. The August 19th meeting was held at Past-President Mildred Caldwell's new projection-room, and was highlighted by the making of 16mm. sound-film shots of the members present, using Clarence Albusch's new RCA sound camera, and with Pat Rafferty acting as Encke. Plans were also discussed for a Club picnic at which another Club production will be filmed.

PRUDENCE BRAKLOW,

Secretary.

Correction!

A very interesting letter from F. Balkin of the Chicago Film Laboratory, Inc., very pleasantly reminds us that in our review of the Caterpillar Tractor Company's most recent film in the last issue of this magazine, we inadvertently gave the title incorrectly. The film is properly titled "Forward for Freedom." We sincerely apologize for the slip, which was due to confusing the title of the film with that of a new booklet just published by the Caterpillar organization.

The letter further takes us to task for our apparent bias in favor of direct-16mm for commercial films as compared to reductions of sound and picture from 35mm originals, and points out that the film in question was a reduction-print, both as to sound and picture, made in their laboratory.

We cheerfully admit to the bias in favor of 16mm, the reason being strictly what we have seen and heard from the screen. To put it bluntly, the great majority of reduction-prints we have screened have been so decidedly inferior to direct-16mm at its best, both as to sound quality and often picture-quality as well, that we feel justified in considering that the direct-16mm is generally preferable.

That this print showed such exceptionally excellent sound and picture quality as to convince not only our reviewer, but also several expert 16mm sound-engineers with whom we projected it, that it was direct-16 rather than a reduction, seems certainly a great compliment to the skill of the Chicago Laboratory's preceding engineers and laboratory experts who were responsible for the achievement. We certainly look forward to increasing more of this organization's work.

CITIZENS OF TOMORROW

Decentenary, 1900 feet Kodachrome, sound.

Presented by the Catholic Youth Organization.

Produced and photographed by Dr. Richard A. Chesrow.

Recording and Kodachrome duping by Geo. W. Colburn Laboratory.

Any picture which attempts to show, as this one does, a cross-section of the diversified children's welfare work done by an organization like Chicago's West Side Community Center, is lacking a subject almost too broad for one film. "Citizens of Tomorrow" attempts this with really surprising success. It conveys, though at times more sketchily than one could wish, an excellent impression of what this institution is doing for these future citizens.

This strictly factual treatment of the

subject is well enough, but when the subject, like this one, deals with human values, we can't help favoring a more personalized approach. A picture telling the story of how this center contacts one underprivileged child, or perhaps one boy and one girl, and helps feed, educate and care for them until finally they are ready to take their places in society, would be even more compelling propaganda in behalf of the institution and its work. It is to be hoped that Dr. Chesrow will some day make that picture, for the story is there, waiting for his camera.

As regards the technical aspects of "Citizens of Tomorrow," Dr. Chesrow seems to have done a decidedly praiseworthy job. His lighting problems in the big kitchen, dining-halls and other rooms of the building must necessarily have been considerable. Here and there, this limitation is evidenced in the falling off in exposure-values toward the background of long-shots; but in most cases, he has wisely covered this technical shortcoming by the generous use of close-ups. His work on the exterior is good, though a slightly fuller exposure would have made for better quality in the duplicate print. His compositions are often quite effective.

The film would benefit decidedly by closer editing; often there is distractingly incomplete action at the end of a scene, which would very well be eliminated. Here and there in the closing sequences showing the activities of the Scout camp, Dr. Chesrow's fondness for the personal rate away with him, and we see extreme long-shots of action which tend to be both repetitious and confusing. These long-shots should be supported by closer angles, for, as in the sequence of the flag-raising parade at the Scout Camp, we are not only interested in the general view of the marchers and their surroundings, but also in the boys themselves. We would be inclined to suggest, too, that in the opening sequence showing the slum district in which the Community Center is located, slawey music would prove a more appropriate accompaniment, changing to the more sprightly music after the picture moves indoors to show the activities of the children in the happier, more healthful surroundings of the Community Center.

HOME MOVIES
PREVIEWS

OLIVER TWIST

Scene film, 4,000 feet, 16mm, black-and-white.

Filed by David Bradley.

One of the most difficult things any amateur or group of amateurs can attempt is the filming of a scenario picture, even if it is only one or two reels in length. The magnitude, therefore, of this young group's task in turning out a 20-reel feature-length film may be appreciated, especially when complicated

by using a famous novel for the story and the necessity for employing "period" sets and costumes.

To say that Bradley and his young associates have completely succeeded in this would be a decided exaggeration. We have seen better, more finished amateur scenario films but we haven't seen many which earned a greater stamp of sincerity and hard work.

The shortcomings of this film are largely of a technical nature. The continuity is basically well handled, though the compression necessary to reduce it even to ten-reel length leave some unavoidable gaps. The photography could be very considerably improved, it shows considerable traces of hesitancy. The lighting of the interiors is rather elementary, and the make-up could be subject to much improvement. However, such difficult and important details as sets, costumes, casting and performances go far to make up for these other technical flaws.

PEER GYNT

Scenario film, 4,000 feet, 16mm, black-and-white.

Filed by David Bradley.

This, apparently young Bradley's second major production, is a considerable improvement over his earlier production, "Oliver Twist," especially as regards technique. The technical details, especially of photography, lighting and make-up, show a tremendous improvement. Some of the photography, both exterior and interior, is remarkably good. There are some excellent angles and lightings in close shots of the character players.

The continuity is less praiseworthy, as might be expected from the rather impressionistic material with which Bradley worked. Several of the individual sequences, however, are excellent, especially the "bad of the Mountain King" sequence, which is excellently impressionistic in treatment. It is to be regretted that some of these more fanciful sequences could not have been filmed with distorting lenses, or against impressionistic sets like those used in "The Cabinet of Dr. Caligari."

The acting and direction of this film are decidedly commendable, and the way the key sequences are edited to synchronize with records of the Greg "Peer Gynt" series is noteworthy.

MOUNTAIN WONDERLAND

Scene 690 ft 16mm Kodachrome

Filed by R. J. Ovedale.

This is a pretty fair scenic, with generally good composition, continuity and titling. However, the filmer was badly at fault with his exposure in many of the long-shots in the forest. Apparently he failed to realize the extreme differences in light-value in the sunlight and the shadows under the trees. This is the sort of a shot where it is absolutely necessary to take separate meter readings of the sunlight and shadowed areas, and as a rule to balance exposure to favor the shadows.

THE BULLETIN BOARD

"Pro-Jr." Shiftover

A long-needed necessity for use with the Spider-turret model Eyemo 16mm hand-camera is the "Professional Jr." Shiftover Alignment Gauge just announced by the Camera Equipment Co., manufacturers of the well-known "Professional Jr." tripod. This shiftover permits the user of a spider-turret Eyemo equipped with the Eyemo pneumatic ground-glass focusing accessory to line up focus and framing in the same accurate way as is done with a studio-type camera like a Bell & Howell or Mitchell. The camera is mounted on a laterally-sliding base so that for focusing it may be slid to the left. In this position the lens, when in front of the pneumatic focusing eyepiece, occupies the identical position it will be in when camera and lens are shifted back into photographing position.

The main element of the shiftover's dovetailed slide attaches permanently to the camera-base, and permits using the regular camera-holding handle for hand-held operation is desired, and may also permit the camera to be mounted on an ordinary tripod when the shiftover feature is not needed. This main dovetail mates with a female dovetail slide on the shiftover base and permits the camera to slide smoothly from photographing to focusing position for permanent adjustment, etc. The camera can be locked in either position by a positive locking device.

The shiftover has a stop-bleed that prevents the camera from sliding off the dovetail base. Novel-grips are provided to position the device accurately as the "Professional Jr." tripod is an any tripod having either $\frac{1}{8}$ or $\frac{1}{4}$ -20 coarse-threading screws.

Colburn Moves

The George W. Colburn Laboratory of Chicago, well-known specialist in all kinds of standardized laboratory work, announces its removal from the office it has occupied for many years in the Merchandise Mart Bldg., Chicago, to new quarters two floors lower, in the same building, in Suite 995. The Colburn Laboratory, as is well known, specializes not only in Kodachrome duplicating and sound-printing, but in making 16mm or 8mm, prints from originals on Norm, 28mm, 17.5mm, and 9.5mm film, as well as reducing 16mm to 8mm, and enlarging 8mm to 16mm.

Emmet Camera Cases

At a time when wartime restrictions have made it difficult to obtain many lines of photographic equipment and accessories, it is more than interesting to note that the several lines of precision-made camera and accessory cases made by the Frank A. Emmet Company of Los Angeles are still available. Among

the several types of cases offered by this firm are Cam-A-Cammy Gadget Bags, and Everready, Slip-on and Push-type cases for cameras. Prices range from \$19.50 for the largest and finest of gadget-bags to as little as \$1.50 for the simpler push-cases.

8mm. Kodachrome Duping

Announcement from the Pacific States Film Laboratory, 1047 North Highland Ave., Hollywood, California, informs us that this firm has perfected a method of making reversal duplicates of 8mm film, in either black-and-white or Kodachrome. The method used is stated to insure perfect definition and register.

"Certified Sound"

Some details of the "Certified Sound" 16mm recording system recently announced by J. A. Maurer, Inc., have at last been released. "Certified Sound" consists of a double-system 16mm. recording system which has been engineered to a degree of operational simplicity which can be described, the manufacturers state, as very nearly foolproof.

The system consists of three units: the recording mechanism, the amplifier, and a portable power-supply.

The recorder is a refinement of the well-known Maurer "8-M" recorder which has become virtually the standard for professional 16mm recording. The amplifier is the heart of the "Certified Sound" system. It is equipped with a remarkable volume compressor circuit which automatically reduces amplification when the sound-input level passes beyond a predetermined point. This effectively eliminates the danger of over-modulating the sound-track when unexpected volume peaks must be recorded. This action is stated to virtually eliminate distortion in recording, and to permit recording sounds of normal volume with a higher amplification or "gain" setting, yet with no danger of "over-shooting" the sound-track.

The amplifier is of course equipped with the necessary ground-noise reduction circuit, a 4-input mixer, microphone pre-amplifier and the necessary indicating meters which, incidentally, have also been greatly simplified.

The portable power-supply unit of the "Certified Sound" system is available in either a 115-Volt AC model or a 12-Volt DC model for field use.

Films Aid War Effort

There are so less than ten distinct fields in which 16mm. motion pictures are aiding in the defense effort, according to an attractive red-white-and-blue illustrated brochure just issued by Bell & Howell's Filmstock Library.

War reports by Americans and United Nations cameramen, civilian defense, democratic principles, aviation, indus-

trial training, emergency first aid, victory gardening, life of friendly neighbors, religion, general education—and morale-building recreation—are the headings, and outstanding new films are listed under each.

There is also a discussion of "how to get equipment," and an offer of a free film "How Motion Pictures Move and Talk."

Copies of the "Films that Fight for Freedom" folder can be obtained free by writing Bell & Howell, Filmstock Library, 1891 Lawrence Avenue, Chicago.

New G-E Photo Data Book

The new edition of the G-E Photo Data Book, completely revised from the 1940 edition familiar to more than 50,000 users, is now available. Whole dealing in a large part with still photography, the new book has a great deal of material useful for movie camerawork as well.

Included in the book's contents are practical picture-making tips, useful tables, essential technical data and helpful suggestions for both black-and-white and color photography. Subjects covered in the book's 112 pages include measuring exposure for copying, metered flash work, color-filters, latest film-speeds (G-E and other ratings) simplified exposure guides, Photoflood and Photoflash exposure data, color-sensitivity classification of films, developer formulas, projection-distance data, and full technical information on the G-E exposure-meter, Photoflood, Photoflash and projection lamps, etc.

The book is conveniently pocket-sized, and sells for 50 cents. It is available through photo dealers everywhere.

New Films

Several extremely interesting new 16mm sound-films have recently been announced by or in production. Among these may be mentioned two 5-reel Kodachrome sound-films made by Ramsey Pictures of Oklahoma City for the American Hereford Association of Kansas City, Mo. The two films are released as a single production under the title "Herefords, the Beef Breed Supreme," but each section is complete in itself. The first reel deals with the ancestry and development of the Hereford since the first importation by Henry Clay in 1817. Scenes of outstanding Hereford herds and ranches in every part of the country are shown. The second reel tells the story of commercial beef cattle from the baby Hereford calf through to the meat-packer. Both films are available from the American Hereford Association on a free loan basis.

Tricks Make Titles Interesting

By JEROME H. ASH, A. S. C.

A GOOD beginning is half the battle in interesting an audience in your picture—and an eye-orienting title is one of the best ways I know of getting a picture off to a good start. Here are a few simple camera tricks that will help lift your titles out of the run-of-the-mill class.

In professional pictures, you've seen titles apparently melt into a formless mass, haven't you? Well, here's an easy way to do it yourself! Begin by making a transparency of your title with a still-camera, using any good, double-coated plate (see roll or can file) like the "Standard Orthofilm." For a plain title, you can simply copy a hand-lettered or typewritten title written in black on a white card; the developed plate, being a negative, will give you white letters on a black field. For an "art" title, you can double-expose your transparency, carrying the background from a suitable still negative. If you're shooting in Kodachrome, you can use your plate with any of the commercially-available toners which will color the emulsion blue, red, green or sepia, and leave the glass letters uncolored.

Now put this into a simple shadow-box attached to your title so that all the illumination on the transparency comes from behind. Line up the title-plate and camera just as you would in shooting any ordinary title.

Now, here's where we come to the trick. In making the transparency, you expose and develop the plate as usual, but when you fix it, fix it in plain water—that is, with no hardener in the solution. This leaves the emulsion soft. Wash the plate as usual, but only dry it enough to get the surface moisture out.

When you've exposed sufficient footage of your title, heat the plate with an electric heater or blow-torch just outside the camera's field, and so close to the plate as you can get it. The heat will melt the soft emulsion, and the title will disintegrate into a formless blob. Sometimes, depending on the means you have for heating the plate, you may find it necessary to have the camera running below normal speed—even in stop-motion, sometimes—to speed up the melting.

If you insert this plate upside down while you do this trick, you can make the title "melt" in, and if you make two

identical title-plates, you can make your title melt itself in and out.

Another shadow-box trick you can do when shooting titles in color is to use a black card with letters cut out, and illuminated only from behind. You can make the letters any color you want by putting colored cellophane behind them.

For example, you can put colored cellophane straws behind the letters, arranged in top-bottom style and in rows of alternate colors. Lit from behind, you'll get a really remarkable effect. And, of course, you can double-expose any picture you want against the black field of this title, and you'll get the effect of multicolored letters superimposed on the picture.

On the other hand, you can illuminate the black field and cut-out letters, and make your whole title of these backlit cellophane straws, preferably with the straws, close together, running horizontally across the frame. Paint your lettering on the straws so that the letters will show up a black silhouette against the luminous, colored background.

Now, suppose you want these letters to animate in, or out. If you want them to animate in, paint the letters, and then as soon as the paint has dried, rotate the straws so that the portion of the letters painted on each straw is on the upper surface of the straw, and thus hidden from the camera. Shoot a few inches of the colored background this way. Then stop the camera and rotate the top row of the straws which have been lettered so that their painted surfaces are toward the camera. Shoot a few frames of this, and then rotate the next lower row, and so on, until all your lettering has been animated in. Then, of course, you can run off the necessary footage of the title, after which you can use the same trick to animate the title-lettering out.

On the screen the effect will be that the letters "wipe" themselves in and out. Naturally, you can make the wipe move up or down as you wish, and by putting the straws in vertically or at a slanted angle, you can make the wipe move horizontally or diagonally.

Another trick you can use is that: take a ball and cover it with a thin coating of either plaster or (if you can get it) shellac. While the surface is

still tacky, stud its surface with small fragments of mica. Then hang this glittery, multifaceted ball behind the cellophane-straw curtain. Focus a spotlight on it so that the light reflects from the ball to the cellophane curtain in your title's shadow-box. If you revolve the ball slowly while you shoot your title, innumerable little points of light will glitter across the title, changing color as they move from one colored straw to the next.

A variation of this is to reflect the light from a drum faced with strips of mirror. I've seen packages of body-powder and bath-salts for sale in drug-stores which come in packages like this. Maybe you could give one to your wife—and then beg the box from her for your movie-making!

If you live in a city where there's a theatrical-supply store, you can get some of the multi-colored gelatins they use for colored-light effects in theatre spotlights. It's known as Brigham's gelatin, and comes in a variety of both solid colors and combinations. One type, I believe, has a sort of rainbow-striped effect and is available in several colors. Other types have mottled effects in different color-combinations. The pattern known as No. 80, as I remember it, is a splashy mixture of green and yellow. No. 85 is a mixture of green, red and clear gelatin. The No. 90, purple, green and clear, and No. 95, red, yellow, green, blue and clear. This material costs only a few cents a sheet, and by using it either directly behind your cut-out title-letters, or in front of a spotlight for front-lighting titles, you can get some very interesting effects. You'll add to them if you keep the gelatin moving so that the color-patterns also move.

The possibilities of three-dimensional trick titles are almost endless. These really run into what the still-photo enthusiasts call "table-top" photography, for what you do is to build a miniature set around the lettering of your title. You can make them just as simple or as intricate as you want.

One clever one I remember seeing is an amateur picture devoted to a child's Christmas costume of a simple, terraced background—probably made of books or something like that, with colored cloth or tissue-paper over them. The letters—the flourish, wooden cut-out block letters—were arranged on the "steps" of this terraced stage. At the sides of the frame were two or three small toys—just enough to give the right atmosphere. The same title-idea was repeated for the end-title. And in this, a small mechanical dooskey was wound up and brazenly wiggled its tail at the camera, while it shimmied over toward the center of the frame!

"Table-top" titles like this give you lots of opportunities to play around with your lighting. You can play with back-lighted and cross-lighted effects to your heart's content. I'd suggest making generous use of spotlights in this, and

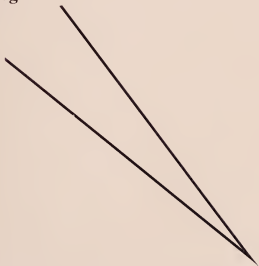
(Continued on Page 418)

Conserve —

Effort

Time

Light



Eastman Films

J. E. BRULATOUR, INC.

— **DISTRIBUTORS** —

Fort Lee—Chicago—Hollywood

Trick Titles

(Continued from Page 416)

by using colored gelatins on the spotlights, you can get all sorts of fascinating color combinations.

"Table-top titles" also give you opportunities for animation. For instance, you can have a printed doll-figure apparently pick up the cut-out letters from a pile and arrange them into words. Or you can have a toy truck or train apparently haul the words in. And you can—but if you want additional ideas, study a few of George Pal's "Puppetoons," and you'll get ideas by the railroad! END

Editor's Funder

(Continued from Page 399)

was, twenty and more exposures on a single negative was an every-day commonplace for the old-time trick-artist. A return to this practice would in many cases be feasible, and would not only conserve film but would give the unproved quality of an original negative rather than a dupe. How to do it? Ask any old-timer! He knows—even if the industry as a whole seems to have forgotten!

Little "Big Games"

(Continued from Page 410)

treating, but I wouldn't try it until I was reasonably familiar with the team's general style of play. Then you can get really characteristic bits of action in slowed-down speed, rather than wasting film on something that isn't important.

Very often—and particularly in the small schools—you can get acquainted beforehand with the coach of the home team, and probably arrange with him not only to give you an official OK to swamper up and down the sidelines with your camera, but to provide him, in exchange, with the privilege of viewing and studying your films of the game. In that event, you'll probably work more in a moderate slow-motion—32 or 40-frame speed, which can in projection be slowed down to almost the equivalent of full-frame shots by slowing the projector. He'll appreciate slow-motion, as it gives him a better chance to study the faults of his players.

Sometimes a coach will be able to help define the coat of film used this way, at other times he won't, but he'll still be glad to have your assistance as the team's official or semi-official cinematographer. As a matter of etiquette, however, make sure beforehand that the team doesn't already have an official cameraman. Some of the larger big-city high-schools do, I believe, have one—usually a professional, but sometimes an amateur from the student body. If you find another amateur is covering the games directly or indirectly for the school, you may sometimes be able to work in collaboration, each "covering" certain angles or certain phases of play

so that each man's scenes supplement the other's.

Finally, be considerate of the people in the stands behind you. After all, they can't see through you—and as most of them are likely to be students of one or the other of the schools represented on the field, they're eager (and decidedly entitled) to see the game. Do your best not to block their view a bit more than you can help.

In the smaller school games, you'll probably have to develop an iron-willed resistance to jibes from the stands. The atmosphere of these games is usually very informal, and when the crowd in the stands feels you're blocking their view too much, they don't hesitate to tell you so, individually and collectively. Very politely, too. When you've reached the point where you can take this "raining" good-naturedly, and still bring back a good picture, you can really call yourself a good sports cinematographer! After all, it's all in fun—and you'll find more fun at these little "big games" than at the really big ones you've been accustomed to filming! END

Autumn Byways

(Continued from Page 411)

Then as the autumn coloring grows more vivid and profuse, you can accentuate it by using a very slight degree of underexposure—very slight, you understand, not more than you'd get by using your meter set for Weston 10 instead of the usual 8 speed-rating. Then later, when the coloring has died out, and fall is merging into winter, you can, if you like, reverse the trick, and by giving a very slight overexposure—say shooting at Weston 6 instead of 8—you can soften the coloring, and make the whole scene tend more toward the pastel shades. This is especially useful in the scenes depicting the first soft snowfall, where you deliberately want to soften the impression of color.

The best of all of this is that you can get a really interesting picture, as out of the ordinary as your paternal grandparents can make it, without going far from home. In fact, you could make a complete picture like this without even having to stir out of your own front yard! END.

Uncle Sam's Cameramen

(Continued from Page 395)

—have given unstintingly and enthusiastically of their time and effort to make this project a success. Due in no small part to their efforts, we have been able to train an absolutely wonderful amount of practical instruction in exterior cinematography into an unbelievably short time. Fortunately, these students do not require instruction in the much more intricate phases of interior cinematography and lighting to do their work for the Army. But as far as exterior cameraman's jobs, every one of the graduates so far has emerged from the course as a field cinematographer you could trust

on any assignment.

"This wouldn't be possible if the students weren't, in the most literal sense, picked men. Every one of them begins the course with a better than average grounding in the scientific fundamentals of photography, and, as a rule, a good deal of practical experience in substantial cinematography as either a genuinely advanced amateur or a 16mm professional. The 'beginner amateurs' and snapshooters are weeded out before they start. The men we get really aren't what I'd call amateurs at all, but serious, well-educated hobbyists. Most of them have an understanding of photographic science and fundamentals as good or better than that of the average professional. We simply build on that.

"The proof of this is in the high grades the students have so far made. We grade very conservatively—but the lowest course mark we've been able to give so far is 84—and the average is up in the 90's. The students are graded not alone on their photographic ability, but upon initiative, physical and mental alertness, and ability to shoulder responsibility and to perform under pressure. Those receiving the highest marks will go into service as Master Sergeants or Technical Sergeants and will probably work in the field or at Headquarters in charge of their own camera crews. Those with lower grades receive lower ratings. Those who fail on the course remain in the Signal Corps, but emerge as privates. We have yet to produce our first private!

"None of us here knows what will be the future of this training plan. Our job right now is to turn out cameramen into the Army says it has enough. I believe we're doing it. But I can't give too much credit to the cooperation we've received from everyone in the industry, and to the remarkably high type of material we've had to work with as trophies. If the Army representatives of the country's amateurs and 16mm professionals, the country may well be proud of them. And as they get out into the field, I'm sure they'll give us additional reason for pride!" END.

Planned Projection

(Continued from Page 412)

habit of viewing our films with the projector's power-driven rewind—but you'll find that rewinding on a hand-powered rewinding board is a lot quieter, and much less distracting to the audience than the chatter of two projectors—our projecting, the other rewinding—going at once. For all practical purposes, it's just as fast, too; I've known of skilled amateur projector-men who worked so well together that the rewind operator could get a reel rewound and hand the empty reel to the projector operator before the projectionist had the next reel so far threaded through the projector that he was ready to feed it into the take-up reel.

If you want maximum speed, of course, you can easily build a motorized rewind out of an inexpensive electric

STIMULATING

THE general excellence of the three Eastman negative films, their special abilities, wide latitude, and exceptional uniformity encourage directors and cameramen to try out new lightings, to strive for original effects—relying on the films' high quality to make the most of every scene. Eastman Kodak Company, Rochester, N. Y.

J. E. BRULATOUR, INC., *Distributors*

Fort Lee

Chicago

Hollywood

PLUS-X

for general studio use

SUPER-XX

when little light is available

BACKGROUND-X

for backgrounds and general exterior work

EASTMAN NEGATIVE FILMS

fan motor. Just attach a suitable bit of strap-iron to the motor-bearing to serve as a support for a shaft carrying a larger pulley belted to the one on the motor-shaft. The shaft on this second pulley transmits, of course, in a suitable spindle to hold the reel. With an outfit like this you can rewind a full 400-ft. reel of 16mm. film in a matter of seconds.

There's been a lot of debate among amateurs for many years as to whether or not it is good projection practice to "bleed" the image slightly off the screen. Personally, I can't see any excuse for it. Usually the amateurs I've known seem to bleed too much of the image off the screen; and to me, at least, it's very distracting to try to concentrate on a picture when I see part of it flickering along the wall and furniture behind the screen. If you want to "bleed," do it conservatively—bleed the image over onto the black frame around the screen, but don't let it bleed off the screen itself. You understand, I am sure, will like the picture much better that way.

I've also heard some debates in amateur clubs as to whether there ought to be some sort of a break between pictures, or whether they should follow each other unintermittently. If both pictures are properly titled, so that there's no possible question as to where one ends and the other begins, my vote would be for the more professional smoothness of uninterrupted projection. If they aren't titled, they shouldn't be shown publicly, anyway. The only time you really need a break between pictures is when you want the clap who made the picture just seemed to take a bow, or to give some explanatory remarks as to how he did it.

Size of screen is another detail that has been the subject of a lot of discussion. I know of at least one large club which rigidly confines itself to the use of a 38-inch screen, on the theory that since they're interested in home movies, pictures at their meetings shouldn't be projected to a size larger than would be the case in an average home. That's one theory; I'll admit, but in the average home screening the audience is much smaller, and everyone is closer to the screen. When, on the other hand, you get a club together you may have a hundred or more members and wives, and the people in the back row are likely to be thirty or forty feet away from the screen. Under such circumstances, a 38-inch screen certainly doesn't even approximate the conditions of home projection!

My suggestion would be to proportion your screen to the size of the audience or hall you hold your meetings in. If it and you (crowd) are small, well and good use a small screen. But if you're a large hall and a large audience, by all means use a screen large enough to everyone—even the latecomers in the back row—can see the picture clearly. With modern emulsions and modern pro-

jectors, even 8mm. is good for surprisingly large-screen projection. Good film will fill a 6-foot screen surprisingly well, and 16mm. will go in even theatrical screens with today's projectors. After all, why not accept the assure in home movies, rather than the assure, when you're a more than knee-neck crowd? END.

Take Your Camera to School

(Continued from Page 409)

tion. Classes like these offer perhaps the most spectacular possibilities, for in addition to the inherently interesting work being done by the students, you have the opportunity to follow some particular student or small group of students from the start of his or her course to its completion and the climax of the student, now a skilled worker, taking his place in some industry which is contributing to America's War Effort.

A year ago two 16mm. amateurs in Cleveland, Anthony L. Cope and John Boras, Jr., collaborated with the city's adult education director, Dr. Harry E. Krieger, in making a two-reel Kodachrome film of this type which presented a cross-section of the classwork and activities of two of Cleveland's excellent high schools. When completed, the film—presented with music and narrative via a public-address system—was screened as a highlight of the commencement exercises.

The film was made as a joint project of the students and teachers of the school. Most of the picture was photographed indoors with Type A Kodachrome, and a sequence illustrating the darkness work of a class in photography was filmed in black-and-white, on red-base film, to present the illusion of darkness (flam action).

Student assistants were trained to assist with the production. The shooting script and schedule had to be prepared very carefully, and planned so as to permit doing most of the work within the normal class periods.

Filming was something of a problem, as it had to be done in crowded class rooms and with previously unbalanced groups of inexperienced actors. Usually, however, filmers Cope and Boras managed at least one slightly rehearsed but fierce shooting.

In order to minimize production problems, each setting was visited and studied carefully beforehand. Thus furniture, lighting, camera positions and general actions and arrangements could be planned in advance. This resulted in saving a great deal of valuable time.

The lighting problems were especially difficult when long-shots of large classes had to be made, as ordinary Photofloods—even in the larger sizes—couldn't always "carry" clear to the back-wall (or Kodachrome exposures). This problem was to some extent avoided by photographing smaller sections of each group at work. In any event, close-ups of the

teacher instructing, and of individual students working, were essential parts of every sequence. The keynote in all of these scenes of practical shop-work was necessarily practical—showing what the students were doing.

In some instances—as in the sequence showing the students passing molten metal in the foundry—a great amount of pre-planning was possible, and little control could be exercised. The cameraman then had to shoot newswreel fashion, and trust to his film-sense to get the scenes needed for good continuity.

The women and girls among the students were by no means neglected, either. Several sequences showed the work of these much more decorative pupils in the business courses. In these sequences close-ups of the various business machines—typewriters, dictaphones, calculating machines, and so on—offered particularly interesting pictorial opportunities as increasingly skillful fingers sped over the keyboards.

In colleges, there are further opportunities. Most of our colleges this year are offering an increasing variety of practical technical courses allied to the War Effort, which lend themselves naturally to participation. In addition, most colleges are concerned in miniature, with their own Air Raid Wardens, Fire Watchers, Auxiliary Police, Rescue and First Aid groups, and so on. A motion picture record of these activities will in time prove an invaluable historical record of how one section of America's youth rose to the emergency. Meanwhile, they offer new and of-the-besides-path filming opportunities which should certainly be utilized by anyone who wants to make something a little different from his usual run of pictures. END.

Answers to Cine Quiz:

1. 8mm and 16mm
2. Too much light.
3. Hide the cameraman from his quarry.
4. The exposure must be increased.
5. At the beginning of a sequence.
6. True
7. False
8. False
9. False
10. True
11. False
12. True
13. True
14. False
15. False
16. True
17. True
18. False
19. True
20. True
21. True
22. False
23. True
24. False
25. True

Precision Editing

(Continued from Page 404)

can easily pick the two frames in which the action of the two shots matches most closely, with the deer in each case open to the same relative degree, the actor through it to the same extent, his hands (especially the one on the darkrobe) in approximately the same position, and so on. Spliced together that way, your two scenes will flow together so smoothly

that the cut will be almost imperceptible on the screen.

In this type of precision cutting, it's a great convenience to have near your rewound an auxiliary spindle to hold the reel on which scene No. 2 is mounted, while the regular rewound spindle holds the reel carrying scene No. 1. In fact, a pair of these accessories—one on each side of the viewer—is desirable, since you'll be working with the "head end" of one scene and the "tail end" of the other. Eastman makes auxiliary spindles like this, but you can easily build them for yourself using an old piece of strap-iron (or even wood) for the upright, and a 3/4-inch bolt for the spindle. If you place the auxiliary spindle at a slight slant, as shown in the illustration, you won't really need any clutch to hold the reel in place, especially as it thus works you'll be winding the film through very slowly. If you want something to hold the reel in place, and yet want to avoid the complication of the spring-actuated catch on commercial rewinds, hinge another length of strap-iron, or even fairly heavy wire, to the base-board so that it can be swung up in front of the reel.

Thus some principle of precision cutting can be used in almost every kind of sequence where in successive cuts you are showing what is supposed to be a continuous single action, such as, for instance, cutting from a long shot in which some person is seen starting to sit down in a chair to a closer shot of the same person in the chair. If you match the action of the two parts of your cut accurately, you can make the two scenes flow together so smoothly that the two actors actually seem to be one continuous eye. The same thing applies to shots of two people talking or doing anything together, and of course it cutting from a long shot to a close-up of a person speaking. In this case, cut your long-shot scene as the lip-movement begins, and start your close shot at a frame where the person's head and lips are in approximately similar positions.

Precision cutting is important in sports shots, too, such as a series of frames where you have one fairly close shot of one player serving, and want to follow it with an equally close shot of the other player receiving the serve. If the second player is shown in the first shot, your key for matching action in the cut is his position, which should be approximately the same in the two cuts. Otherwise, the position of the ball is probably the key item to concentrate on in making the precision cut. The same thing applies to almost any other sport—driving, baseball, football, and so on. Successful in driving, by the way, you can get some very interesting effects by shooting two drives by the same driver, from the same viewpoint, and filming one at normal speed and one at a slow-motion speed, and cutting from one take to the other in the middle of the drive. This of course must be done at a point in each scene where the positions of the

driver's body match up closely, and if possible arrange it so that there won't be any sudden disappearances in the background.

This sort of precision editing is one of the hardest parts of movie-making because it calls for painstaking attention to detail. But if you'll try it—even on an old picture you've always considered as completely edited—you'll find it will give your films a smoothness you seldom see outside of professional pictures. END

Movies of Children

[Continued from Page 405]

the camera far enough away so your little actors aren't so painfully conscious of it. Sometimes you can conceal the camera, and get even more spectacular results. John Arnold, A.S.C., the MGM Camera Chief, for example, sometimes hides his camera inside the house and shoots out through a big window at his children playing in the yard outside.

If you can add a remote-control to the telephoto lens set-up, you can often "steal" your scene, getting close to the youngsters to direct their play, or even take part in it, and trip the camera unbeknownst to them, at the proper moment.

But there are times when even the best-tempered children are inclined to balk and "don't want to play." For a strictly home movie, the best thing to do in such a situation is to quietly get the camera away and finish your shooting some other day.

But if you're making a scenario picture, especially if you are working with a group of other people and children, you can't always wait so conveniently. Then, as I've found in my studio work, the promise of some reward will usually be a powerful inducement. But—if you promise a child something, for Heaven's sake, keep that promise! For a child never forgets a broken promise. If you tell him "if you do this for me, I'll give you a nickel, or an ice-cream cone, or that funny-book you want," live up to your word! If you break faith with him once, he'll remember it, and next time you promise a reward, he'll refuse to play. Half my success in directing children in professional pictures has been due to the fact that, no matter what happened, I have never permitted myself to make a promise I did not fulfill.

Finally, remember that as soon as the players in a film—whether they be adults or children—show any trace of self-consciousness, camera-consciousness, or direction-consciousness, the director has failed in his job. This is just as true of a home movie of the baby's first footsteps as it is of a \$2,000,000 professional super-production. Any time you're making a movie that involves people, the keynote of success is complete naturalness—the impression that the people on the screen didn't have any idea their picture was being taken. And it's the director's duty, first, last and always, to

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put her action at ease from the start and keep them that way to the finish, so that the final picture on the screen registers that impression of naturalness. END

Defense Films

(Continued from Page 494)

ing the food that's grown in these gardens.

Conservation of transportation is another essential filming subject. Films explaining and encouraging the "share-a-ride" idea are useful in any community, so, too, are films that explain why we're asked not to make unnecessary use of taxicabs, buses, street-cars, and trains, and why week-end travel is being discouraged.

In each instance, you'll find both Federal and local agencies which can provide you with the information you need to make your film, and which will in most cases welcome your efforts as something that will help them in their work.

Remember, though, that really worthwhile films like these can't be made without expense. And that expense will usually prove to be a good deal more than just the cost of the raw film exposed. Unless you or your club are in a position to underwrite the cost of production—usually several hundred dollars per reel—you'd better begin by finding out where that money will come from. Some Defense Councils may be organized in such a way that once they've recognized the necessity of the film and your ability to make it, they can underwrite the expense; most of them aren't so fortunate. But if you've the ability to back up your plans, it's very possible you may find a sponsor among the local business houses, the Chamber of Commerce, or groups of businessmen and public-spirited citizens.

For example, insurance companies and sometimes large agencies can be interested in sponsoring films dealing with the prevention of accidents from fires, black-outs, dim-outs, and similar wartime conditions, including in some cases industrial accidents in Defense Industrial plants. Transportation companies can be "sold" on a picture that encourages the public to respect the staggered hours plan of riding to and from work. A newspaper might be persuaded to star their home economist in a series of reels devoted to the economical use of foods, the preservation of foodstuffs, the use of left-overs, and so on. The circumstances are likely to be different in each town, but the opportunity exists everywhere.

Wide use of instructional pictures of that type has been made in England. The authorities there give great credit to the use of non-theatrical motion pictures for the success they have had in training the public in war measures, not only in such obviously necessary things as watching for the blitz and minimizing air-raid damage, but in the unrememberable little things in life which have enabled the British people to keep up, and turn every detail of their country's economy—even scrap—to further the war effort.

About a hundred and fifty of these British pictures are available in this country in the 16mm. form, either from the British Information Service, 30 Rockefeller Plaza, New York, or through Bell & Howell's Filmmount Library. A complete listing of them, entitled "What Goes On in Britain Today," may be had from either of these sources. Among the topics listed you'll find such headings as "Civil Defense," "A.R.P. Training Films," "Blitz," "Army, Navy, R.A.F.," "Women at War," "The British People in Wartime," "Wartime Industry," "Agriculture," "Health, Education and Child Welfare," etc.

Studying these British films will help you in making yours, but in most cases, we need films—even on the same subjects—that interpret the facts in terms of American community life. There's an opportunity for you to make films like these which will help the War Effort, even if you don't happen to live in one of the coastal "corridor zones."

There is a host of subjects. The films can be informative, educational and of great immediate value. They may have merely local interest, they might in some cases be even of national significance. But the main thing is to get the picture made—and then see to it that it is seen! Your picture, no matter how well made, will not have done a complete job until it has been shown at least once to every available audience! END

"Strobo-Sync"

(Continued from Page 493)

where the light from the projector's gate can fall upon the turntable.

In mounting the pickup, be sure that the cartridge does not rest over tubes in the amplifier as the heat from the tubes will ruin the cartridge. If the tubes are entirely enclosed within the case itself during operation, several round holes should be provided in the sides of the case to allow for adequate ventilation and heat passage from the motor and amplifier. This is important since an overheated motor will not operate evenly and may burn out during operation.

The case itself may be covered either with automobile topping or Spanish leather obtainable at most auto supply or leather stores. The author used Spanish leather, and found that although it is a trifle more expensive it is nevertheless much more beautiful and durable. Spanish leather, incidentally, is a patent leather material used for automobile upholstery and comes in a variety of colors and patterns.

So much for the materials that make up the reproducing unit. Now for the actual recording and synchronizing of the disc to the film.

If the movie maker has a recorder at his disposal, he can save the cost of cutting the discs. However, in any event, he should select only the best recording blanks available. These, at present, are the glass-base "acetate"

discs. Aluminum-base discs are apparently not "for the duration." Avoid the use of steel-base or unusually thin aluminum-base blanks as these have a tendency to warp and cause uneven depths in cutting. Cardboard or paper-base discs should never be used as these usually have a very high scratch level and will not stand repeated playings.

Good recording blanks of the 16-inch size are now made by Audio-Gal, Allied, Presto, Gold-Standard, and E.C.A. Only a good sapphire cutting-stylus should be used as this will allow the lowest possible surface-noise in the recording.

It is taken for granted that the recorder will and must be "warmed" free and operates at the correct speed of 33½ rpm; also that it will cut up to at least 8000 cycles with a fairly flat response curve. Further downfalls in recording may be obtained from the several manufacturers now on the market.

As to varying the length of your film it is only dependent on the number or lines per inch that the recorder will record. If your recorder cuts 96 lines per inch, a 16-inch blank on one side will record for 17½ minutes, at 94 lines per inch, 19½ minutes, at 112 lines per inch, 21 minutes; and at 128 lines per inch, 22½ minutes.

These times may vary a bit with different makes of recorders, but for the most part they are good indications of the true lengths. However, please bear in mind that the closer you cut to the center of the disc, the more loss of high-frequency sounds results and distortion creeps in. Usually, 15 minutes, the length of a single 300 foot reel of film, is all that can be tolerated if good quality of sound is wanted.

As a preliminary to the actual synchronizing, check your projector to see whether it has two, three, or four blades in its shutter. This is important since it is the number of flashes per second in ratio to the rpm of the turntable that maintains the speed of projection and correct synchronization. Also once again check your recorder speed after it is thoroughly warmed up, to be sure that it is cutting 33½ rpm steadily.

Arrange the projector so that the spilled light from the gate falls upon the recording turntable, or better yet, place a small mirror or shiny piece of metal in front of the projector in such a way as to reflect a bit of the projected picture onto the center of the recording turntable. Place a blank disc on the recorder and put the stroboscope disc (in the illustration) on the top of it over the spindle. Without cutting (unless you are using a test disc), start the projector which should be loaded as in a "take," and also start the recorder.

Turn out the lights or darken the scene as completely as possible and adjust the speed of the projector until the bars on the "strobe" band corresponding to the number of blades in the projector shutter appear to stand still. At this speed, when the bars on the correct band appear to stop, the projector is running at exactly 30½ frames per

setted. Note the speed-setting of the projector and then stop both the recorder and the projector. Rewind and rethread the projector, but do not change the speed adjustment of the projector.

Run off enough film to bring the first frame of the main-tittle or picture into the projector gate aperture. Better yet, blank out or scrape off the emulsion of a frame on the leader about ten frames in advance and use this as a "sync" mark, starting the projector here both on recording and playback. If your projector has a clutch, start it with this, as it will give it an almost instantaneous start; otherwise be sure that your projector is warmed up so that it will come up to speed quickly when started by switch. Start the recorder, lower the cutting stops, and check on your set.

Then when the first note of music is sounded, or your commentator starts to speak, start the projector and immediately check the strobe disc for synchronization. If it is running slightly counter clockwise, slow down the projector just a bit to stop the bars. If the bars are going clockwise, speed the projector just a bit until they stop. Then during the entire recording watch the strobe for any changes in projector speed which may arise due to power fluctuations in the A.C. line or the increasing load on the take-up pulley, and adjust slightly as necessary. If the bars appear to be running in either direction but can be seen readily the error is 3% or less.

A little practice and you will find it very easy to hold synchronization throughout the entire recording. It is wise to go through a complete rehearsal at least once before recording to smooth any irregularities that may develop between yourself, the recordist, the commentator, and the musician or an assistant providing an accompaniment being re-recorded from standard 78 rpm phonograph records played on a dual-turntable reproducer.

After finishing the cutting, transfer the finished recording to the playback turntable along with the strobe disc, and repeat the operation for cutting, as far as syncing is concerned. If the recording was carefully synced during its making, it will play back in perfect synchronization providing the strobe is checked occasionally during playback, to be spoiled light from the projector gate or the reflected light from the screen.

After a little practice it will be found that lip motion on the screen can be very easily matched to the disc and successfully held in gear. However, before attempting to do this, make sure that the camera you use for filming is running up to speed—16 frames per second, and not at 15 or 14 frames per second. This is important, as two or three frames-per second difference will make it hard for you, actors to match their lips to the faster action of 16 $\frac{1}{2}$ frames per second on the screen. The 1/2 frame per second difference is not so noticeable and can be matched easily on post-recording.

For those using cameras and projectors at the sound-film camera speed

of 24 frames per second, a stroke can be made up as will be shown very shortly so that sound-on-disc can later be transferred to sound-on-film without a change of speed.

Here it might be said that dust and grease are the worst enemies of disc recordings, even more so than of motion picture film itself. Grease will catch and hold dust and the two will become yoked into the grooves of the record, raising the noise-level of the disc as it is played. Keep your discs in a dust free place, handle them by the edges with carefully washed hands or lint-free cotton gloves for that purpose (for the ones you use for adding your pictures) and when not in use protect them in dust-proof envelopes and store them flat in a cool place.

Never allow acetate discs to become heated, as the surface may literally melt on you. If dust or grease should get on the discs they may be washed gently with plain soap and water. A complexion brush (intended for use on women and babies) should be used to remove the grease from the grooves. However, be careful not to get the center label wet as the glue used to fasten it to the disc may run into the grooves and ruin the disc.

It is a good idea to copy the strobe disc shown and fasten one permanently to each disc with paper rubber cement (Duro, Lapages' or other extra cement may be used for this purpose, but the thinner of the cement is also a thinner for the surface of the record—so do not get any of it on the grooves or your disc will be ruined).

The theory of the stroboscope disc is as follows: There are 360 degrees in a circle. When this revolves at 33 $\frac{1}{3}$ rpm it revolves in a blade of 11,500.8° per minute. A three-bladed shutter on a projector running at 16 $\frac{1}{2}$ frames per second flashes light 93 times per second, or

3900 times per minute. Therefore, dividing the flashes per minute into the number of degrees per minute will give us 330 or for practical purposes 4 $\frac{1}{2}$ ° per flash.

In other words, as each bar of the three-bladed hand on the strobe disc moves through an arc of 4 $\frac{1}{2}$ °, the shutter flashes light off and on over, so that the 93 bars in the hand appear to stand still when the projector is running at 16 $\frac{1}{2}$ frames per second and the turntable is revolving at 33 $\frac{1}{3}$ per minute.

The rotation of a two-bladed shutter (33 $\frac{1}{3}$ flashes per second) for a 6" (or 66-lin hand) and that of a four-bladed shutter (44.00 flashes per second) for a 3" (330 lin hand) are also the same.

For this reason 16 $\frac{1}{2}$ frames per second was adopted as standard since any projector could be used interchangeably, re-

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ardless of the recording projector, for playback, and synchronization could be maintained.

An error of one per cent in speed is undoubtedly detectable by this method and close syncing can therefore be expected providing the operator is careful in recording and playback to keep the projector-speed constant by use of the strobe. Recently the author finished a 45-minute 16mm Kodachrome film for the Boy Scout Organization in Syracuse, using this method with very successful results, the film employed both narration and lip action.

It is the hope of the author that the system described will enable amateur movie makers to obtain more enjoyment from their hobby as well as provide a more professional appearing, and interesting presentation of their films to their audiences. Comments as to the success of this system or suggestions as to its improvement from other amateurs will be very welcome.

Following is a list of parts of the author's equipment and their prices:

(prices subject to change since purchase date.)

11-78 rpm Green Flyer motor, model H5104 and 12-inch weighted turntable	\$11.99
Astatic 8-12 pickup arm and original cartridge using needles (cartridge used now as spare)	7.61*
Astatic permanent point (sapphire) cartridge (crystal) No. L.P. 21—(mounted on wooden block to fit above pickup arm)	4.80
Wright-DeCoster 6-inch dynamic speaker (now used as auxiliary only)	15.00*
Jensen 12-inch dynamic speaker—model C12 X 8093 A (mounted in open-ended portable case 29" x 14" x 8")	18.25
50 feet 2 wire cable with five-prong plug	1.88
Parts for amplifier using two 2A5's, one 6J, one 6R, and one 80 tubes, including a microphone input, tone and volume controls, two phone inputs	7.54
Plywood for pickup, amplifier, and tunable case 25" x 18" x 8" with cover, and brackets and screws, plus wood for speaker cases	1.32
Spanish leather covering for cases	3.60

\$40.59

*Not included in cost above—used only as spares.

The amplifier was designed and built by R. William Stummage of Syracuse and allows for the insertion of various types of correction networks to match the recording curves of the discs played. It has a flat response from 40 to 8000 cycles and is down about 2 db at 10,000 cycles. The rest of the equipment is of the author's own design and construction. RND

Joe Ruttenberg

(Continued from Page 397)

job if I possibly could. No so in the one day remaining before the use was slated

to fall on me, I put on a display of efficiency such as I'm sure has never been seen in any newspaper office. Instead of taking things easy on the bench and rotating the calls in turn, I plucked myself right at the Editor's shoulder. Whenever he wanted a boy, I was there, Johnny-at-the-hot-hole, before he could get farther than "B—"

At the end of the day, I stepped up to him with a properly crystallized eye and said I understood he was going to let me go. Instead, he told me he had had his eye on me, and because of my unusual efficiency, he was going to raise my salary like a week!

"He also asked me to look around and let him know what phase of newspaper work I'd like to go ahead in, as the next time there was a vacancy in that line he was going to transfer me to a better job!

"Well, I'd seen enough of the workings of the paper to know that the work of the cameraman interested me. And before long, I was promoted to the post of assistant in the darkroom.

"I hadn't been on that job long—barely long enough to know my way around the darkroom—when a really big story broke. A big excursion-steamer down the coast was wrecked. All the available camera men were rushed down to the dock, to shoot pictures of the survivors as they came in, and to buy up any films the excursionists might have snapped. My boss, the head laboratory-man, was off duty, leaving me alone in the darkroom. I tray developed over 300 rolls of amateur film that night in addition to the plates sent in by our own staff-men, and made hundreds of prints. Working with wet negatives, I'd admit I raised quite a few shots in the printing—but enough of them came out well so that the 'American' had a fine display of photos of the wreck to spread across page 1 of the next edition.

"As a result of that night's work, it wasn't long before I found myself promoted to a full-fledged cameraman. And my first big assignment was a tough one, too. I'd worked around on routine, unimportant shots for quite a while. Then one night, right around Christmas-time, we got word of a big train-wreck. Due to the holiday, none of the other cameramen were available, so I was elected—green or not.

"As I was packing my outfit to go out, one of the head men saw me putting a flash-gun and a supply of flashpowder into my kit (this was long before the days of flashbulbs) and told me that because one of the staff men had been blinded by a misfired flash shortly before, an order from the big boss had just gone into effect banning all further use of flashpowder by the 'American's' cameramen. Reluctantly, I left the flash equipment behind, and went out to cover a big night-time story minus flashlighting.

"When I came back with a nice collection of negatives, everyone was amazed and accused me of either breaking the anti-flash rule or pulling some

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not of a stroke. In reality, I hadn't done either. I'd simply worked a little trick that was possible back in those days before the synchronized flash was invented. Naturally, I wasn't the only news cameraman on the scene, all the "American" competitors were well represented—and they, at least, weren't working under my taboo against flash-powder. So I simply set up my camera and, when I saw one of my competitors getting ready to fire off his flash, I'd open my shutter and let the one flash make both our pictures! The gang in the "American" City Room got quite a kick out of the way I had let my competitors flash my pictures for me."

All told, Rutenbergs spent eight years with the "American," and then opened a successful portrait and commercial studio of his own. During this period, he did a great deal of work for Joseph Urban, the famous stage designer. Urban's work, as this writer remembers it, possessed the modern technique of using dramatic lightings to achieve dramatic effects on the stage. In his production set-designs, lighting and stage-groupings or compositions were combined to unusually high artistic effect, and the work that Rutenbergs did with Urban at this time, photographing actual sets, designers' models, and sketches with different systems of normal and colored lighting, undoubtedly had a lasting influence on Rutenbergs' camerawork.

During this association, Urban took Rutenbergs on an extended tour of Europe's theatrical centers. "I was supposed," he says today, "to photograph stage settings in the various places visited. But as a matter of fact, I exposed a total of 17 negatives on the whole trip. It was a wonderful experience, though, and even though I didn't take many pictures, I learned a great deal that has since been very helpful to me."

It was at about this time, too, that the movie bug began to bite Joe Rutenbergs. He bought an old movie camera and, setting up a small laboratory, for a year or more he photographed and produced a local amateur for the Loew theatres in the Boston area. He got a very thorough grounding in the fundamentals of motion picture work through this, for in addition to photographing his stories, he had also to develop his own negatives, edit the weekly reel, and make the prints and titles himself.

The newsreel venture ended abruptly, however. One day a big story came along just at the reel's deadline. Joe himself went out with his camera to cover it—a spectacular fire—and rushed the exposed negative back to the laboratory where his partner, a strictly non-technical man, was to rush the film through development. When Joe returned to start making the prints, he found that the negative had shrunk so badly it would not go on the printer; his partner had tried to make the film dry more quickly by immersing it in alcohol. "So," as Joe says, "there wasn't any newsreel that week—and when the shoot-

ing was over our newsreel was a dead duck!"

But the experience this venture had given Rutenbergs had been enough to decide him that making motion pictures might be his forte. So he sold his equipment, picked up his savings, and headed to New York, which was then a major center of production. For a newsman to get a camera job wasn't very much easier in those days than it is now, and Joe had the unpleasant experience of watching his life savings dwindle while the studios, with surprising unanimity, informed him that no job was available for him.

Finally came a day when the last of Rutenbergs' carefully-hoarded savings vanished. And here his story takes on a Florida Algeresque turn. A cousin of Joe's learned he was in New York and, probably sensing what must be happening to Cousin Joe's savings, kidnapped him bodily to share his apartment and a job presented itself. Then, in true Alger style, came a call from the old Fox East Coast Studio that there was an opportunity for Joe to start work immediately as an assistant cameraman!

From this point on, Joe Rutenbergs was on the right track, headed forward at full steam. He didn't remain an assistant very long—hardly more than long enough to learn the ropes of studio cinematography. Then one day the cameraman whom he was assisting retired from the picture after an argument with the director, and Joe was asked if he felt capable of carrying on and di-

recting the picture. He felt he could—and proved it by finishing the picture in such fine style that from then on he remained a First Cameraman.

He was one of the cinematographers, too, who helped keep New York going as a production center long after the greater part of the industry had moved to Hollywood. Finally, however, some seven or eight years ago, he, too, came to Hollywood. And it is since then that he has

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time his first work. Winner of the Academy Award for "The Great Waltz," and repeatedly in the nominees' circle for almost equally outstanding photographic achievements, Joe Ruttenberg is one of those rare cinematographers who always every scene he films with the unmistakable imprint of his artistic personality.

This doesn't in the least mean that he gives every scene the same technical and artistic treatment; he doesn't, but even though he varies his lightings, compositions and general treatment to match the mood of the scene, he maintains always an indefinable pictorial touch which stands out as clearly as any written signature.

Ruttenberg has no use for "formula" photography. "No two scenes or scenes are ever exactly alike," he'll point out, "and even the same scene would probably be different if you did it twice with different scenes or different directors. So if you want your photography really to fit the action and mood of the scene, how in the world could you do it if you be yourself to a strict formula of photography?"

"I'll admit one week would be a lot easier if we could reduce it to a handy formula of 'so much key-light here, as much fill-light to balance it there, and so much lighting arranged so, and so, and so, to light the set.' But working that way would rob our gaze of the elements of realism and dramatic feeling which do much to bring the story and action really home to the audience. And you can only make things real, and key them properly to the dramatic mood of the scene, by sitting your photography to the individual requirements of each scene as it comes along.

"Sometimes this may mean going right against accepted 'rule book' formulas of lighting and composition. So what? If your scene or your picture are better for it, who cares if you break a few photographic taboos?"

"I do think, though, that except where for a definite dramatic reason you're trying to show something as visually unattractive, a cinematographer should try to make his compositions as pleasing as possible. After all, the audience has to focus its eyes and its attention on the comparatively small rectangle of the screen for an hour and a half or two hours, and good compositions are a lot easier to look at than bad ones! Remember, too, you can use your compositions to help center attention on whatever is the most important part of a scene, thereby making things that much easier for the players and director.

"All told, if I have anything like a 'system,' it would be something like this, begin by making the best possible composition with whatever you have at hand. Then arrange your lighting so that the scene and effect are really believable—and there you are! As long as you start with a good composition and end with a believable effect, you can't go very far wrong, no matter what you're photographing." END.

Movie-Making Cemetery

(Continued from Page 376)

stage which had about a "Hollywood touch."

In order to eliminate the distraction of recognition of familiar faces in our own sales force of more than a hundred men and women, we employed professional actors through Central Casting. The first and second films dealing with somewhat similar scenes were photographed at the same time and involved about 250 scenes. Stock-shots needed were supplied by Dick Whittington.

Having an acetate recorder made it possible for us to record both records, using voices from our own staff. This gave us a clearer "feel" of the subject and we could try out the sales psychology before the Sales Manager and Division Managers before investing in the master recording. Final narration was done by Fred Shields, of radio KFI, whose voice delivers the message in a clear and authoritative manner.

The number one film, "Ten Seconds Flat," covers the correct and incorrect approach to the prospect's home. Being the first film shown in the course, the opening sequence acquaints the audience with "Bill Warner" and his family, the character name representing the salesman in all films. Indirect story presentation has eliminated to a certain extent some of the "right and wrong" technique usually followed in instructional films.

"The Broad Winner," film number two, demonstrates and discusses the correct answers to questions which arise, and forms a strictly demonstration film for both old and new men.

Sales tactics in Forest Laws are in some ways more difficult to handle than most, as the methods and procedures involved require tact and consideration beyond and above other selling problems. Needless to say, the Personnel and Sales Departments have selected only representatives of very high caliber; as the work of representing an institution of this kind requires a high degree of intelligence and understanding. The turnover in the sales staff is small, and in many instances only one or two applicants are accepted and trained each week.

Besides the visual aids, lectures, and study, each applicant for the sales staff upon acceptance is individually instructed in order to determine the position best suited to his abilities and talents. Part of each day during the first week is spent in tours through the Park and the various departments.

Upon completing the first week, each student is sent out in the field with a seasoned trainer until he has mastered sufficient knowledge to stand on his own feet. Applicants for other departments are, of course, given similar special training courses and guided by their respective department heads before being given full responsibilities.

As the representative progresses with

his knowledge and understanding of the work, his division manager can again review sales policies with the existing slide-film.

Like many institutions, Forest Lawn is, of course, concerned with the present raw-stock situation, and the far-reaching decisions of recent date affecting film for non-theatrical purposes can slow up or bring to a standstill our visual training program. Fortunately, our supply of film stock should allow us to complete the two new scripts which will make the number three and four films. Beyond this point, we must all look to the results of our armed forces and the policies of our government in the present crisis.

The author, like all producers of training and morale building films, feels that this work has a definite part in furthering the war effort. We, of course, all know that the straight advertising film, having no direct purpose other than to publicize a product or service, is not only "out" for the duration, but is justifiably unnecessary under the circumstances.

To those of you who have time and money invested, and who plan to carry on, may I suggest that you let it be known that this work, your work, is in no small way a necessary and vital part of the War effort.

If our Allies, and, in fact, our enemies, feel that the independent producer and the morale film are necessities, should it not be the duty of this country and our government to see that this capable and able group be allowed the tools of its trade in order that we can keep up the good work by projecting the message before the non-theatrical audience and the armed forces? Naturally, we are aware that film is taking a vital war necessity, and that its manufacturing materials which may be needed elsewhere. But let us not forget how it has been proved both here and abroad that films on a strip of motion picture film in the form of propaganda and instructional films can be fully as explosive and as worthwhile to a nation at war as is the gasoline which might be made from the same cellulose and nitrates.

If film is to be denied to civilians in order that the government and the Armed Services may be assured ample footage for their vast and essential training-film programs, we of the non-theatrical field have no complaint. We do, however, feel that a great deal of carnation should first take place in the theatrical field, eliminating such wastes as double bookings, the huge number of release-prints often used, and so on. This would assist the War Effort not only by freeing for essential Governmental use a lot of film stock the use of which otherwise is at least questionable, but also, we may hope, permitting a supply of film to be provided for use by those who are best equipped to produce essential non-theatrical films for propaganda on the home front, and for institutional and public training and instructional purposes. END.

Combat Cameraman

[Continued from Page 294]

efficers. There was no time for definite measures of fast and they yanked him up bodily and simply threw him across to the destroyer, where he came to ninety hours later. A few moments later the piled depth-charges exploded, and the ship from which he had been so providentially rescued sank.

Since then there has followed lengthy hospitalization, first in Egypt, then in South Africa, and finally in England, but at the last reports cinematographer Borisovskii is nearly fit again, and waiting for further useful assignments.

He reports that no matter what risks one takes, getting worthwhile action pictures of modern warfare is incredibly difficult. If there are to be shots of today's battles like the history-book pictures of battles of a century ago, they, too, will have to be painted, he says, and the movies will have to be staged if they're to look like the average layman's idea of battles. For in modern warfare, the distance between the units engaged, the dust, and the ever-present haze conspire to make the photographer or cinematographer concentrate on his own side of the light. The German propagandist films, he states, are all staged, mainly just after the capture of a place, to give greater realism. END.

16mm. Recording Methods

[Continued from Page 292]

ing is useful only for tests or for films which are not intended for duplication. On the contrary, single-system recordings can be re-recorded and printed on as many duplicate prints as desired. The only disadvantages of this system are that there is a slight loss in high frequencies in the recording, and the fact that the original sound-track must necessarily be re-recorded before it can be easily edited and prepared for release-print duplication. Since it is absolutely necessary to obtain a separate sound-track for editing purposes, even if the original recording is made single-system, it is certainly more logical and more direct to make the separate sound record by the double-system method whenever conditions permit.

Professional 16mm sound films, like 35mm, are usually re-recorded after editing to balance sound levels, to introduce music, sound-effects and narration. If the operation of re-recording from a single-system original can be circumvented by making the original recording by double-system, then the final release-print will be one step closer to optimum sound quality and costs and complication will be reduced.

Carrying this argument to its logical conclusion, it would seem best to obtain as the sound recorder a direct-positive sound-track if any re-recording is to be done. This has, in fact, been done by one 16mm commercial producer who specializes in reversal and Kodachrome originals. He had his recorder built so

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that the modulation started at the edges of the sound track area and filled in the space to the center. The galvanometer was so arranged that at zero modulation the sound-track area was completely filled in (black) except for a thin, clear line at the center. Maximum modulation showed up as a thin black area with a large white area, which is the same as a positive sound-track.

Another method of achieving the same end is to use a reversal film for making the original sound-track recording. Only the slow, fine-grain reversal films such as Eastman's "Cine-Kodak Safety Reversal Film" are suitable for high-quality double-system original sound recording.

If the sound original is made on a high-resolving sound recording negative film, it must be printed only on a sensibly sound prints and on fine-grain positive film to get a positive sound-track that will be acceptable for re-recording. If the best 16mm printers are not available, the better results can probably be obtained by using a fine-grained reversal film, instead of negative film, for the sound original. This is especially true of recordings which will be re-recorded before release-printing; these are decidedly in the majority in professional 16mm production.

If music recordings are an important part of the production, then the ability of high-resolving sensitive film (with proper non-slip printing) to record extreme high frequencies gives them an advantage over reversal film. However, for speech recordings and for music recordings from commercial discs, reversal originals leave nothing to be desired.

Of the 16mm sound systems available, the "B-M" equipment made by J. A. Meurer, Inc., of New York, is regarded as standard among practically all 16mm professional producers. This fact is a tribute alike to the soundness of this equipment's design and manufacture, and to the high quality of recording possible with it.

This firm has recently introduced a new, simplified system of 16mm sound-recording equipment and methods, referred to as "Certified Sound." This equipment adds to the excellent features of previous B-M units several new features which simplify the operation of the equipment and almost guarantee better sound quality.

The "Certified Sound" system consists of only three units: the recorder, the power-supply, and the amplifier. This amplifier unit contains the audio recording amplifier, the automatic ground-roof reduction amplifier, a 4-position mixer, high- and low-pass filters, indicating meters, a microphone pre-amplifier, and a new volume-compressor circuit which almost completely eliminates the possibility of over-modulation.

This remarkable compressor circuit begins to operate and to limit further amplification when the percentage of modulation reaches 31.6%. It essentially reduces the amplification of high-level sound so that they do not cause the galvanometer to "overshoot" the limits of the sound-track area and thus cause distortion in the recording. This feature makes it possible to ride the gain higher on sound of ordinary volume-level, such as voices or natural sound-effects, without danger of overmodulating a sudden increase in sound-level.

The power-supply for the equipment is available in either 115-Volt AC model or a 12-Volt DC model for field use with 12-Volt batteries.

Unlike 16mm recorders, the Meurer recorder is built to operate in either direction, for making recordings to be printed either with reversal or Kodachrome picture-originals, with duplicate negatives from such reversal originals, or with negative originals. In 16mm, production all picture originals (including Technicolor) are on negative film. This eliminates the necessity of having a film recorder which will record going either "forward" or "backward."

But in 16mm, since both negative and reversal films are used for picture originals, a professional 16mm recorder must necessarily be able to record equally well in both directions, so that it can produce sound originals which will have the same relative position as the picture with which they will be printed.

For this season, all 16mm sound-recording stock is available in two windings. One is called the "A" or "1" winding, and the other the "B" or "2" winding.

Film with the "A" winding is used with the recorder operating from left to right to produce sound negatives from which sound positives can be printed for duplication with reversal or Kodachrome originals.

"B-winding" film is used with the recorder operating from right to left to produce sound negatives which can be printed with original picture negatives.

Type "A" winding is also used to produce sound negatives which can be printed with black-and-white prints made from duplicate black-and-white negatives from reversal or Kodachrome originals.

Obviously it is very important for the professional 16mm producer to know film of both windings on hand so he can use whichever may be required for the particular type of picture he is producing. Reversing the film in the darkroom so as to make, say an "A" winding out of a "B," is definitely not recommended.

Simple as this operation may seem, it is almost certain to introduce static markings on the film during the rewinding process. This point cannot be stressed too strongly; strict observation of this little precaution will save the 16mm producer a very great deal of trouble in his recording.

Sixteen millimeter sound-recordings made with Mauter equipment on a modern recording stock like Agfa's high-resolving, yellow-tinted stock or Eastman's high-resolving sound-recording film (emulsion type 38-18291) with proper filter to give an essentially metachromatic recording light, and of course properly exposed, developed and printed, are capable of results which compare very favorably with the average 35mm recording. With proper materials and processing, the frequency-response of 16mm recorders, amplifiers and film is essentially flat up to a frequency well beyond the ability of commercially available projectors to reproduce.

If we compare the results obtained in 16mm release-prints made by reduction-printing from 16mm sound-track with 16mm prints made from 16mm original track, it is more than likely that the direct-16mm will outshine the reduction-print. The reason for this is that 16mm recordings are generally not equalized for reduction to 16mm; and to the characteristics of 16mm reproducers, so while the original 16mm recording may equal or surpass the results obtained in the direct-16mm recording, it is definitely inferior to the direct-16mm recording after it has gone through the reduction process without the necessary filter compensation.

There is absolutely no basis of comparison between 16mm recording equipment and 35mm recording equipment when such factors as simplicity, portability, cost, convenience, and the way the recording will sound when reproduced by a 16mm projector are considered. Direct-16mm means as all-around! With the new Mauter "Certified Sound" system, the entire recording outfit is completely contained in three cases and can be carried conveniently in even the smallest of automobiles. The Berit "Amixon" equipment for double system recording packs into two even smaller cases (so three, if the power-pack is used)—such case about the size of a portable typewriter case—and the recently-introduced "Amixon" single-system recorder, which gives excellent results, is equally compact.

The necessity of double-system production in the printing and editing stages of professional production has led to the development of special double-system projectors in 16mm. Usually these double-system projectors are adaptations of commercial sound projectors rebuilt by or for their users so that they will project sound and picture from separate reels and keep them in exact synchronization. Both Bell & Howell or Armoa projectors are easily adapted to double system projection, and since a projector of this type is so essential in professional work, a photograph of a Bell & Howell

adaptation is shown here with to indicate the general method.

No double-system 16mm projectors are available commercially as yet. However in England, shortly before the start of the war, a unit of this type, known as the "Tamar Link," was marketed as an accessory for Bell & Howell sound projectors. The device consisted simply of a metal sub-base upon which the standard Filmasound was mounted, with appropriate feed and take-up reels to carry the extra length of separate sound-track film.

We have spoken of the necessity of re-recording professional 16mm sound-tracks. To date, only one type of re-recording or "playback" head is available in 16mm. This is the film phonograph or re-recording playback made by J. A. Maurer. This unit has practically the same film movement and optical system as the B. M. recorder, and when used in conjunction with a B. M. recorder, is capable of making re-recordings which, to speak conservatively, are every bit the equal of the originals. By introducing suitable filter compensation into the re-recording circuit, it is entirely possible to make re-recordings that are decidedly better than the original. This is even more true when the re-recording amplifier circuit includes the "Certified Sound" compressor and other features some producers have exhibited reels re-recorded with this circuit which, while rather indifferent recordings in the original, were made decidedly acceptable by the "Certified Sound" re-recording process.

Generally speaking, all but the very simplest offstage narrative sound-tracks need re-recording if the best results are to be had. Therefore the professional 16mm producer should include two or preferably more film-photographs in his sound-recording equipment. In some instances, commercial 16mm projectors have been extensively revamped and modified for this purpose, but obviously a film-photograph designed especially for this service will have better film movement and optical characteristics, and will give higher-quality results.

In each of these principal types of 16mm professional production—namely, (1) silent film with offstage voice added, (2) the all-synchronous dialog film, and (3) a combination of voice dialog and

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offstage and dialogue with or without music and sound-effects—different recording techniques is required.

The simplest type of film is the silent film with an offstage voice added. If no musical background or sound-effects are required, this type of production can be made without re-recording, though it will naturally benefit by it. However, if re-recording equipment is available, it can simplify some of the problems of getting the original recording if the off-stage narration is broken down into sections lasting only two or three minutes, so that the narrator can rehearse and record in short sections, getting emphasis, timing, etc., right in one session before proceeding to the next. If the timing is not exactly right in any of these sections, pauses can be lengthened or shortened in editing to make the speech fit. Then the entire re-cut narration can be re-recorded to match the levels of the different sections, also obtaining the narration on a complete strip of film, without splices, which is of course preferable for printing purposes.

If a musical background or sound-effects are to be added to the narration, it is much more economical to record the narration alone and then duplicate the narration, and to assemble the music and any necessary sound-effects on one or more separate reels. Whenever music, narration or sound-effects are not required, opaque black leader is inserted in the reel to give the proper spacing. Then in a final re-recording operation the music, the music and the sound effects may be combined into one correctly labeled sound-track.

When only parts of a musical selection are to be used, or parts of two or more different selections are required to fit the changing needs of interest action, positive prints of the selections required can be assembled on two separate reels, with blank film as necessary for spacing. This makes it possible to use parts of selections in a musical film-library without the necessity for cutting the prints and hence destroying their future usefulness.

The surplus given to film-photographs may seem exaggerated to readers who have not had the experience of using them, but my own experience has taught me that it is very necessary for the professional producer to have several of these units, which are quite as important in quality production as is the original recording equipment.

For the all-synchronous dialog film which has no narration, no added sound-effects and no music, only one film-photograph is needed, and that for the purpose of matching voice-levels in the different sections of the film. If a musical background or sound-effects are to be added to the sync-dialog film, two or more film-photographs will be required, with the sync dialog in one, the sound-effects in another, and the music track or tracks in one or two additional play-backs. The same is true when a film contains dialog, narration, music and sound effects.

Options on this next point differ, but it has been my experience that it is much more economical to re-record musical backgrounds from film recordings than from disc recordings. If the only available recordings of certain music or sound-effects are on discs, it will be best to transfer the disc recordings to film and then re-record from the film. The professional producer will certainly find it advantageous to have at least one really superior disc transferable and packing for transferring his discs to film, and then to do all further re-recording and mixing from film-photographs.

This technique is of course familiar to 15mm. producers and technicians, who may sometimes combine 10 or 15 separate sound-tracks to make one final recording. The important thing I am trying to point out is that to produce recordings in 16mm. comparable to theatrical films recording, the 16mm. producer and technician must have comparable equipment, including acoustically correct studios, microphones, amplifiers, recorders, and re-recorders. That equipment exists, even though it is not as yet used by all 16mm. professionals. But the results it is giving in the hands of these 16mm. professionals who have such equipment and use it intelligently prove that in its rapidly-growing field—wherever release-points on a picture are to be in 16mm.—direct 16mm. picture and sound are not only equal, but superior to the bulkier and more costly 35mm. END

"Rationed" Sets

(Continued from Page 20)

a background pose, and imaginative lighting suggest a great deal more to the unseen than actually exists on the stage.

To do this, though, the art-director and the cinematographer must not only work together, but they must know beforehand with absolute accuracy just what angles are going to be required to film any given action. Sets like that will be planned for just those angles, and no others. Unexpected "protector" shots at different angles will be largely impossible, because as set background will have been provided for them. This will undoubtedly hamper the director who is not sure of himself, or the one who prefers not to take the cinematographer and art-director into his confidence. But given competence, imagination and genuine cooperation among these three key creative workers, it is possible to make the camera's one-eyed perspective go a long way toward helping to minimize the limitations on production value which the present set-construction limits seem to impose.

All told, while none of us can deny that the present restrictions on set-building are cramping our style to a considerable degree, it doesn't seem too optimistic to feel that these same limitations may force us to make use of talent and all too largely unused potentialities in our craft which may turn out to be in the long run offsetting advantages. END

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